

1 GREGORY P. STONE (State Bar No. 78329)
gregory.stone@mto.com
2 BRADLEY S. PHILLIPS (State Bar No. 85263)
brad.phillips@mto.com
3 STEVEN M. PERRY (State Bar No. 106154)
steven.perry@mto.com
4 BETHANY W. KRISTOVICH (State Bar No. 241891)
bethany.kristovich@mto.com
5 MUNGER, TOLLES & OLSON LLP
6 355 South Grand Avenue, 35th Floor
Los Angeles, California 90071-1560
7 Telephone: (213) 683-9100
Facsimile: (213) 687-3702

8 Attorneys for Defendant Intel Corporation
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10

11 **UNITED STATES DISTRICT COURT**
12 **NORTHERN DISTRICT OF CALIFORNIA**
13 **SAN JOSE DIVISION**
14

15 IN RE: HIGH-TECH EMPLOYEE
16 ANTITRUST LITIGATION

Master Docket No. 11-CV-2509-LHK

17 THIS DOCUMENT RELATES TO:

18 ALL ACTIONS
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**DECLARATION OF GREGORY M.
SERGI IN SUPPORT OF
DEFENDANTS' JOINT MOTION TO
EXCLUDE THE EXPERT TESTIMONY
OF MATTHEW MARX, PH.D**

1 I, Gregory M. Sergi, hereby declare and say:

2 1. I am an attorney with Munger, Tolles & Olson LLP, counsel of record for Intel
3 Corporation (“Intel”) in this case, and am admitted to practice before this Court. I make this
4 declaration in support of Defendants’ Joint Motion to Exclude the Expert Testimony of Matthew
5 Marx, Ph.D and the Memorandum of Points and Authorities in support thereof. I have personal
6 knowledge of the matters set forth herein and could and would testify competently to each of
7 them.

8 2. I have attached as Exhibit A a true and correct copy of the Expert Report of
9 Matthew Marx dated October 28, 2013.

10 3. I have attached as Exhibit B a true and correct copy of certain excerpts from the
11 transcript of the deposition of Matthew Marx, taken in this matter on November 15, 2013. The
12 submitted excerpts include the reporter’s certificate.

13 4. I have attached as Exhibit C a true and correct copy of the Rebuttal Report of
14 Matthew Marx dated December 11, 2013.

15 I declare under penalty of perjury under the laws of the United States that the foregoing is
16 true and correct.

17 Executed this 9th day of January, 2014 at Los Angeles, California.

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20 DATED: January 9, 2014

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23 /s/ Gregory M. Sergi

24 Gregory M. Sergi
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Exhibit A

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION**

**CONFIDENTIAL – TO BE FILED UNDER SEAL
SUBJECT TO PROTECTIVE ORDER**

**IN RE: HIGH-TECH EMPLOYEES ANTITRUST
LITIGATION**

No. 11-CV-2509-LHK

THIS DOCUMENT RELATES TO:

ALL ACTIONS

EXPERT REPORT OF MATTHEW MARX

October 28, 2013

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I. Experience and Qualifications

1. I am the Mitsui Career Development Professor of Entrepreneurship and Assistant Professor of Technological Innovation, Entrepreneurship, and Strategic Management at the Massachusetts Institute of Technology Sloan School of Management. I earned a B.S. degree in Symbolic Systems from Stanford University in 1993, an S.M. degree in Media Arts and Sciences from MIT in 1995, an MBA degree from Harvard Business School in 2005, and a Doctor of Business Administration degree from Harvard Business School in 2009. I have published work in peer-reviewed journals including Management Science and the American Sociological Review. I am an expert on the topic of employee non-compete agreements.
2. In addition to my academic experience, I spent approximately a decade working at startup companies. During this time I wrote thousands of lines of C++ code, obtained seven U.S. patents, and led engineering teams of up to 75 workers.
 - a. At Speechworks International (Boston, MA), I served as an engineer and later Director of Customer Solutions and launched one of the first commercial implementations of speech recognition technology for United Airlines. Speechworks completed an IPO in 2000.
 - b. At Tellme Networks (Mountain View, CA), I reported to the CEO as Vice President of Client Services and attended board meetings regularly. Tellme was acquired by Microsoft Corporation in 2004 for approximately \$770MM.
 - c. At Vlingo Corporation (Cambridge, MA), I helped write the initial business plan and worked as a part-time consultant while completing my doctoral studies. Vlingo was acquired by Nuance Communications in 2011 for approximately \$250MM.
3. My curriculum vita is incorporated in this report as Exhibit 1. My hourly rate for time spent working on this matter is \$500.
4. I have in this report relied on the best information available to me at the time of its preparation. A list of documents on which I relied in the preparation of this report is provided in Exhibit 2.

II. Introduction, Assignment, and Summary of Conclusions

5. I have been asked to provide an expert opinion regarding the following questions.

- a. Would I expect agreements limiting competition for workers among the Defendants, such as the conspiracy alleged here, to reduce worker compensation?
 - b. Was Defendants' conspiracy, including the express Anti-Solicitation agreements, reasonably necessary to achieve the "collaborations" and other goals identified in their interrogatory responses?
6. Based on the documents I have reviewed, my professional experience, and my research on non-compete agreements, I have a number of conclusions expressed in the report, which I also summarize here.
 - a. The Anti-Solicitation agreements evidenced by the exhibits, depositions, and Defendants' interrogatory responses do not simply represent autonomous choices made by individual companies. Rather, directors, CEOs, advisors, and senior executives conspired to suppress cold-calling. Internal announcements confirm the reciprocal nature of these agreements.
 - b. These Anti-Solicitation agreements were not independently arrived at by pairs of firms. Rather, these illegal arrangements were disseminated through a tight network of co-located, interlocking owners, directors, and advisors. The original Pixar-Lucasfilm arrangement was known to Pixar CEO Steve Jobs, who then instigated a similar agreement with Adobe and, though board member Eric Schmidt, with Google. Google replicated the agreement with Intel's CEO, who sat on its board. Intuit, whose chairman sat on Apple's board and also closely advised Google, requested to be brought into the fold. All of these directors lived in the San Francisco Bay Area, though employees across the companies were affected.
 - c. Although the Defendants claim that Anti-Solicitation agreements are critical to successful technical collaborations, the evidence does not support this contention. First, Defendants successfully managed technical collaborations without Anti-Solicitation agreements. Second, some Defendants attempted to establish Anti-Solicitation agreements with companies where no technical collaboration existed. Third, the people most involved in establishing the collaborations testified they were unaware of the Anti-Solicitation agreements. The contracts memorializing the collaborations make no reference to the Anti-Solicitation agreements. Fourth, the circumstances of how the Anti-Solicitation agreements were reached and enforced show that they were unrelated to collaborations. Instead, they were reached to eliminate competition for labor, suppress employee mobility, and suppress employee compensation. Hence, the

challenged Anti-Solicitation agreements at issue were not, and could not have been, reasonably necessary to technical collaborations among them.

These Anti-Solicitation agreements were not limited to individuals involved in collaborations but rather extended to all employees of the firms involved. Moreover, and contrary to employee non-compete agreements, the vast majority of these workers (excepting HR recruiters and some senior executives) had no idea that their opportunities to learn of external job opportunities were being restricted in this way. Further, Defendants provide no justification whatsoever for the Anti-Solicitation conspiracy among them. There is none.

- d. It is clear from the evidence that the Anti-Solicitation agreements were established for the purpose of suppressing compensation. Certain co-conspirators used the pretext of “embarrassment” as justification, while others were clear in their desire to stem the outward flow of talent to competitors who were growing quickly, with no mention of technical collaborations. As Anti-Solicitation agreements limit the flow of job opportunities to workers, as do employee non-compete agreements, Anti-Solicitation agreements would indeed limit compensation in the way that Defendants’ chief executives hoped they would. Indeed, it may be that Defendants enacted this secretive conspiracy in order to gain advantages beyond those afforded to companies by non-compete agreements, which are unenforceable in California.

III. Defendants’ Conspiracy, Including Defendants’ Express Anti-Solicitation Agreements

7. The Defendants in this case are a group of prominent, California-based technology companies: Adobe, Apple, Google, Intel, Intuit, Lucasfilm, and Pixar.¹

¹ Adobe Systems Inc. (“Adobe”) is a Delaware corporation with its principal place of business located at 345 Park Avenue, San Jose, California 95110, Apple Inc. (“Apple”) is a California corporation with its principal place of business located at 1 Infinite Loop, Cupertino, California 95014, Google Inc. (“Google”) is a Delaware corporation with its principal place of business located at 1600 Amphitheatre Parkway, Mountain View, California 94043, Intel Corp. (“Intel”) is a Delaware corporation with its principal place of business located at 2200 Mission College Boulevard, Santa Clara, California 95054, Intuit Inc. (“Intuit”) is a Delaware corporation with its principal place of business located at 2632 Marine Way, Mountain View, California 94043, Lucasfilm Ltd. (“Lucasfilm”) is a California corporation with its principal place of business located at 1110 Gorgas Ave., in San Francisco, California 94129, and Pixar is a California

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Before getting into the details of the individual Anti-Solicitation agreements, it is important to establish that the key issue is not simply that there were some number of Anti-Solicitation agreements to which Defendants were party and which fail the DOJ criteria for legitimate agreements necessary to a collaboration.

8. First, these were hardly isolated agreements. Apple, Google, and Pixar were party to at least two Anti-Solicitation agreements with other Defendants. Apple and Google were party to three such agreements with other Defendants. We also know that Apple and Google attempted to establish additional Anti-Solicitation agreements (with Palm and Facebook, respectively).
9. Second, the Defendants' chief executives do not have a random geographic distribution but are concentrated in the San Francisco Bay Area. All Defendants are headquartered in California, where strict labor laws limit the ability of companies to block their employees from leaving to join another company in a similar industry. The absence of enforceable non-compete agreements in California may help to explain why such a conspiracy would arise here.
10. Third, the Anti-Solicitation agreements here all included the identical terms and had the identical scope. They all prohibited solicitation of any employee, regardless of title, job duties, or geographic location. They all had limitless scope, both in terms of limitless geographic reach and no expiration date. I agree with the Court that it "strains credulity" that such identical agreements could have been reached in isolation.²
11. Fourth, the Defendants are far from unconnected to each other. Rather, they are interlinked through a thick network of ownership, governance, and friendship. These ties shed light on the motives behind the Defendants' assembly of a conspiracy to reduce interorganizational mobility of workers and, as a result, lower compensation. It is important to note that in the absence of employee non-compete agreements, this network of Anti-Solicitation agreements enables the Defendants to (illegally) lower their labor costs as compared to non-Defendant competitors.
12. Indeed, this desired end state is seen in the very first Anti-Solicitation agreement, between Lucasfilm and Pixar, as the principals of those companies freely admit in

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corporation with its principal place of business located at 1200 Park Avenue, Emeryville, California 94608.

² Order Granting In Part and Denying In Part Defendants' Joint Motion to Dismiss; Denying Lucasfilm LTD.'s Motion to Dismiss at 14:7-19

their depositions. Both companies are connected via ownership and governance to Apple CEO Steve Jobs, who personally purchased the Pixar division from Lucasfilm and served as its CEO. Unsurprisingly, these companies struck Anti-Solicitation agreements, as did other companies with ownership or governance connections.

13. The initial nexus of agreements among Jobs' own companies expanded considerably against an interwoven and insular group of leaders. Steve Jobs had mentored Google founders Brin and Page; CEO Schmidt served on the board of Apple; and Schmidt's primary mentor and advisor, Intuit Chairman Bill Campbell, sat with him on Apple's board. Google later entered into an Anti-Solicit agreement with Intuit at Campbell's request. Again, with Intel, there was a connection: Intel CEO Otellini sat on Google's board and learned of the agreement from Google's founders.
14. Perhaps as illuminating are Anti-Solicitation agreements that were sought but not consummated. Jobs, who already had multiple such agreements in place, threatened Palm CEO Ed Colligan with patent litigation if he did not join the network of agreements (he refused). Schmidt, who began to lose employees to Facebook, organized an effort to orchestrate an Anti-Solicitation agreement with Facebook. (Note that Intuit Chairman Bill Campbell was intimately involved in this effort.)
15. Taken together, what follows will show that the alleged Anti-Solicitation agreements were far from isolated, disconnected occurrences. Rather, they were part of a network of owners and directors who believed in suppressing mobility and compensation and who spread the idea to fellow CEOs and senior executives at similar companies where they were involved. Where their targets appeared weaker (e.g., Apple→Palm), they used threats. Where their targets appeared stronger (e.g., Intuit→Google, and later, Google→Facebook), they leveraged their professional and social connections to achieve their desired outcome.
16. I have reviewed the Plaintiffs' complaint and other court documents describing the company-to-company agreements designed to prevent one company from cold-calling employees of another company. I will refer to these as Anti-Solicitation agreements. My understanding is that the chronology of the alleged Anti-Solicitation agreements is as follows:³

³ See ADOBE_001096-097 and 231APPLE002145 (Adobe-Apple); PIX00003419 (Apple-Pixar); 231APPLE002140 and 231APPLE073139 (Apple-Google); GOOG-HIGH TECH-

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- a. In the mid-1980s, George Lucas and Ed Catmull established an Anti-Solicitation agreement between Lucasfilm and Pixar, stipulating that each other's employees were "hands off to each other in terms of soliciting talent."⁴ Lucas and Catmull were both explicit that the company-to-company Anti-Solicitation agreement was designed to suppress employee compensation. Lucas noted "we cannot get into a bidding war with other companies."⁵ Catmull similarly noted that "it messes up the pay structure. It does. It makes it very high."⁶
- b. The next recorded Anti-Solicitation agreement was between Apple and Google in February of 2005. Jobs expressed frustration with Google's hiring of Apple employees to Google founders Sergey Brin and Larry Page as well as Apple board member Bill Campbell,⁷ who was advising Google CEO Eric Schmidt and "regularly attended" the company's executive staff and board meetings.⁸ Jobs threatened to go to "war" with Google unless Google agreed to his demands.⁹ Google CEO Eric Schmidt apparently agreed to stop soliciting Apple's employees, as evidenced by an email from Bill Campbell to Steve Jobs saying that "Eric [Schmidt] told me that he got directly involved and firmly stopped all efforts to recruit anyone from Apple."¹⁰ Moreover, Schmidt's action was coordinated with Apple, whose head of Human Resources, Danielle Lambert, internally announced the Anti-Solicitation agreement between the two companies: "Please add Google to your 'hands-off' list. We recently agreed not to recruit from one another so if you hear of any recruiting they are doing against us, please be sure to let me know. Please also be sure to honor our side of the deal."¹¹ Lambert also confirmed the existence of an agreement in an email to Steve Jobs: "We are researching Google to see who's there and learn what we can about their backgrounds, but are not directly calling them directly [sic] given the agreement you &

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00008281-284 (Google- Intel); GOOG-HIGH TECH-00008342-350 (Google-Intuit); and Deposition of James Morris, August 3, 2012 at p. 93 (Lucasfilm-Pixar).

⁴ Deposition of George Lucas (96:19-25)

⁵ Deposition of George Lucas (44:16-25)

⁶ Deposition of Ed Catmull, (179:17-25)

⁷ Exhibits 557, 1868, 1869

⁸ Deposition of Shona Brown, (36:25-37:3)

⁹ Exhibit 1871

¹⁰ Exhibit 199

¹¹ Exhibit 563

Sergey struck not to recruit from one another.”¹² Google later terminated a recruiter who cold-called Apple employees in violation of the Anti-Solicitation agreement, with Google Vice President, People Shona Brown emailing Google CEO Schmidt and members of her team to “[p]lease make a public example of this termination with the group.”¹³ That Google’s practice of not cold-calling Apple’s employees was not merely an internal-only policy, but in fact an agreement between the two companies, is underscored by Schmidt’s relaying news of the recruiter’s termination to Jobs along with his “apologies.”¹⁴

- c. Very shortly thereafter, Google and Intel entered into another Anti-Solicitation agreement. Google’s senior executives told Paul Otellini, Google Director and Intel CEO, about their Anti-Solicitation agreement with Apple.¹⁵ Moreover, Otellini intended to keep the deal secret: “we have a handshake ‘no recruit’ between Eric and myself. I would not like this broadly known.”¹⁶
- d. Apple and Adobe followed suit after Jobs threatened Adobe CEO Bruce Chizen that he would solicit “any Adobe employee who is not a Sr. Director or VP”.¹⁷ This Anti-Solicitation agreement was consummated in May of 2005. Moreover, Jobs made clear that he expected such arrangements to be company-to-company: “I have a standing policy with our recruiters that we don’t recruit from Adobe. It seems you have a different policy. One of us must change our policy. Please let me know who.”¹⁸
- e. In April of 2007, Pixar and Apple formalized an Anti-Solicitation agreement as evidenced by an email to Pixar’s recruiting staff that “we won’t directly solicit any Apple employee” and that Danielle Lambert of Apple “will ask her Recruiting team to follow the same procedure.”¹⁹

¹² Exhibit 861

¹³ Exhibit 192

¹⁴ Exhibit 250

¹⁵ Deposition of Sergey Brin (74:15); Deposition of Eric Schmidt (126:10-11)

¹⁶ Exhibit 651

¹⁷ Exhibit 223

¹⁸ Exhibit 223

¹⁹ Exhibit 139

f. Intuit Chairman Bill Campbell “requested that Intuit be added fully to the Do Not Call list” at Google;²⁰ Google agreed not to recruit from Intuit as of June 2007.

17. These agreements ended no earlier than March 13, 2009, upon receipt of Civil Investigative Demands from the Antitrust Division of the United States Department of Justice.

IV. I Would Expect Agreements of this Sort to Reduce the Compensation of Class Members

18. Aside from federal and state minimum wage laws, companies are under no legal obligation to pay their (non-union) employees any particular amount. Workers discover their market value by exploring potential matches at multiple companies and routinely negotiating compensation at the time of joining. This “price discovery” mechanism is described in extensive detail by Dr. Edward Leamer in his reports,²¹ and I shall not repeat his argument here except to emphasize that cold-calling employees of other companies is a means of disseminating information regarding market value.

19. Even if companies receive many applicants for posted openings, these may not represent the most attractive candidates. Jonathan Rosenberg of Google observed that “the people who apply, on average, aren’t as good.”²² Even if such applicants were sufficiently attractive, the speed at which certain companies wish to grow may not be supported sufficiently by inbound applications. In June of 2004, prior to the institution of the Anti-Solicitation agreements with Apple and Intuit, Google VP, People Shona Brown emphasized that “[w]e will need to drain competitors to accomplish this rate of hiring” in an internal email including both founders and the CEO.²³

20. The rapid growth targeted by companies such as Google, and hoped for by investors including venture capitalists, is exactly the threat Pixar President Ed Catmull identifies as driving his decision to enter into Anti-Solicitation agreements: “Every time a [competitor] tries to grow rapidly...it seriously messes up the pay structure...by offering higher salaries to grow at the rate they desire, people will hear about it and leave.... We have avoided wars up here in Northern California because all of the companies up here...have conscientiously avoided

²⁰ Exhibit 597

²¹ Expert Report of Edward E. Leamer, Ph.D.

²² Deposition of Jonathan Rosenberg (27:19-32:7)

²³ Exhibit 1753

raiding each other.”²⁴ Catmull explicitly admits that he entered into company-to-company Anti-Solicitation agreements for purposes of suppressing compensation.

21. The post-employment covenant not to compete agreements (hereafter, “non-competes”) I have studied resemble Anti-Solicitation agreements in that they limit workers’ ability to explore potential employment opportunities outside of their current employer and thereby suppress compensation. However, they are significantly more limited in scope than what Defendants adopted here. I will give some background on the nature and use of non-competes and then discuss their implications for compensation.
 - a. A non-compete is a written agreement signed by an individual worker and a representative of an organization, with at least two stipulations regarding the types of employment the worker may not accept after separating from the current organization.
 - i. First, the non-compete designates a *field of service* in which the ex-employee will refrain from taking a job. Based on my review of several workers’ non-compete agreements in my fieldwork, this is sometimes represented as a list of other organizations but more frequently is described as a type of occupation or industry. For example, a non-compete for an engineer working on database optimization might stipulate that the engineer cannot take a job doing database optimization after leaving the current firm.
 - ii. Second, the non-compete designates a *time period* following separation from the employer during which the ex-employee will refrain from taking a job in the designated field of service. In a survey I conducted of more than 1,000 members of the Institute of Electrical and Electronics Engineers, the duration of non-compete agreements ranged from six months to more than five years.²⁵
 - b. These two stipulations combine to restrict the sorts of opportunities the worker may productively explore after separating from the firm. Although the non-compete contract only explicitly bans the worker from accepting an employment offer in the designated field of service for the designated time period following separation from the firm, the disincentive to the worker for exploring certain extraorganizational job opportunities is clear.

²⁴ Exhibit 154

²⁵ Marx, Matt, “The Firm Strikes Back: Non-compete Agreements and the Mobility of Technical Professionals.” *American Sociological Review* 76(5):695-712.

Moreover, jobs most likely to make use of the worker's skills and thus likely to present the most attractive opportunities are exactly those circumscribed by the non-compete. Accordingly, non-competes impact workers in at least two ways.

- i. First, non-competes act as a brake on interorganizational mobility. The causal effect on non-competes has been established in two articles, one where I am an author and the other by Mark Garmaise of the Finance Group at the University of California, Los Angeles Anderson School of Management. In the former, my coauthors and I exploit the inadvertent reversal of non-compete enforcement policy in Michigan during 1985. Prior to the reversal, Michigan had proscribed non-compete agreements. Comparing rates of interorganizational mobility between Michigan and a group of control states, We find that the job mobility of patenting inventors in Michigan dropped by 8.1% compared to inventors in states that continued to proscribe non-competes. Moreover, the effect is twice as strong for inventors with specialized technical skills.²⁶ Garmaise found similar results regarding the mobility of executives in large public firms.²⁷
- ii. Second, non-compete agreements reduce compensation. I found preliminary evidence of this effect in my fieldwork, which included 52 in-depth interviews and a survey of more than 1,000 members of the Institute of Electrical and Electronics Engineers. My research showed that employees subject to non-competes who nonetheless left their jobs also left their industry, taking less attractive jobs in fields where they could not use their skills. "*I intentionally looked for general-purpose programming, and I took a substantial pay cut to go there,*" said one scientist with a Ph.D who was blocked from taking another job in her field by a non-compete agreement.²⁸ Large-sample evidence for the causal effect of non-competes on compensation comes from the aforementioned

²⁶ Marx, Matt, Deborah Strumsky, and Lee Fleming, "Mobility, Skills, and the Michigan Non-Compete Experiment," *Management Science*, 55 (2009), 875-889.

²⁷ Garmaise, Mark, "The Ties That Truly Bind: Noncompetition Agreements, Executive Compensation, and Firm Investment," *Journal of Law, Economics, and Organization*, 27(2):376-425.

²⁸ Marx, Matt, "The Firm Strikes Back: Non-compete Agreements and the Mobility of Technical Professionals." *American Sociological Review* 76(5):695-712.

article by Garmaise, based on three separate alterations of state-level non-compete enforcement policies in Texas, Florida, and Louisiana. He finds that executive compensation varies inversely with increases in the strength of non-compete enforcement.

22. There are of course differences between non-compete agreements and Anti-Solicitation agreements.²⁹ First, non-compete agreements are between employers and employees—usually in writing—both of which have knowledge of what they are covenanting (not) to do. By comparison, the alleged Anti-Solicitation agreements were struck between executives of different companies, without the knowledge of the vast majority of employees affected by the agreements. Second, non-compete agreements do not bar the employee from approaching or being approached by other companies, or even interviewing with those companies; they only bar the employee from taking the job. Thus an employee subject to non-compete agreements could in theory explore outside options even without the intention of leaving the current employer and thus without breaking their covenant. By contrast, the alleged Anti-Solicitation agreements necessarily curtail the flow of information from external companies to the employee, to the extent that a given employee might otherwise have been cold-called. Third, as noted above, non-compete agreements must be limited as to the field of service and the duration of the restriction. By contrast, the alleged Anti-Solicitation agreements were not constrained as to duration or the types of employees who were covered. As such, they are more akin to the “general” restraints outlawed by the 1711 *Mitchell v. Reynolds* decision, which allowed only for “particular” or limited contractual restraints on the ability of employees to search for and obtain new employment. In addition, the vast majority of workers affected by an Anti-Solicitation clause were wholly unaware of its existence and did not agree to it. While one might make the argument that workers who enter into non-competes “know what they are getting into” the same can hardly be said of the Class here.

²⁹ There is also another type of agreement, often called a “non-solicit” which may sound like the Anti-Solicitation agreements which are the subject of this report. However, a “non-solicit” is, like a non-compete, a contract between an individual and an organization, *not* between two or more organizations. Non-solicits, which I believe are valid in all 50 states including where non-compete agreements are unenforceable, stipulate that for some period of time following the worker’s separation from the firm, that worker will not personally recruit (or set in motion, for instance by providing a referral to a recruiter), former co-workers at the ex-employer. Note that such an agreement would not preclude the worker’s new employer cold-calling workers at the former firm, as long as they were not referred by the worker who signed the non-solicit agreement. The two types of agreements should not be confused.

V. Defendants' Conspiracy Was Not Reasonably Necessary to Achieve the "Collaborations" and Other Goals they Identify

23. Prior to this case, I had never heard of companies agreeing not to recruit any of each other's employees, either in my academic or business-world experience. First, I am unaware of any scholarly investigation of company-to-company Anti-Solicitation agreements. Second, during my time in the business world I spent several years working at high-technology companies not unlike the Defendants and where technical collaborations were routine. As Vice President of Client Solutions at Tellme Networks, I led a team of several dozen engineers and managed a multi-year technical collaboration with Nuance Communications, a company also focused on speech recognition. The employees of each company possessed skills valued by the other and might have been at risk of being recruited away via cold calls. Moreover, other parts of the company had technical collaborations with other companies. Although I reported to the CEO and frequently attended board meetings, I am unaware of any discussion of Anti-Solicitation agreements between Tellme and any other company.
24. I have reviewed Defendants' interrogatory responses in which they claim that the company-to-company Anti-Solicitation agreements were essential to the successful execution of important technical collaborations. I note at the outset that no Defendant attempts any justification of the conspiracy at issue—Defendants deny the existence of the conspiracy and instead address only the express Anti-Solicitation agreements. Defendants' arguments are as follows:
- a. While Google denies reaching any Anti-Solicitation agreement with any other company, it justifies what it asserts are only internal, unilateral policies not to solicit any employee of Apple, Intel, and Intuit because Google claims that it "perceived that engaging in cold-calling of these companies' employees could jeopardize the important collaborative and business relationships between Google and those companies."³⁰
 - b. Adobe claimed that "the non-solicitation policy between Adobe and Apple fostered a close working relationship over the last thirty years" including "over 200 cooperative agreements."³¹
 - c. Intuit denies reaching an Anti-Solicitation agreement with Google, yet it argues that "[i]f one or the other company is using the collaboration as an

³⁰ Google Inc.'s Responses to Plaintiff's Second Set of Interrogatories at 9.

³¹ Defendant Adobe Systems Inc.'s Amended Response to Plaintiff's Second Set of Interrogatories Directed to Defendant Adobe Systems Inc. 5, 6.

opportunity to identify the other company's best employees for the purpose of recruiting them, it will create a lack of trust and a disincentive to assign the best employees for them to be as open with each other."³²

- d. Apple claimed that it was necessary to reach understandings with its labor competitors to "refrain from actively recruiting each other's employees" to "assure[] Apple's partners that Apple will not use the knowledge it gains through its collaboration to 'cherry pick' its partners' employees...[because] such solicitations are disruptive to the relationships."³³
- e. Lucasfilm claimed that its collaborations with Pixar, including RenderMan, "would not have been possible without the full commitment of and long-term institutional input from both Pixar and Lucasfilm...if the companies were to actively raid one another's best employees during those collaborations, that could destabilize production teams."³⁴
- f. Pixar claimed that the Anti-Solicitation agreement with Lucasfilm avoided "cold-calling activity that could be harmful to that close relationship and disruptive to these beneficial collaborations."³⁵ Regarding its Anti-Solicitation agreement with Apple, Pixar claimed its relationship with Apple was "assisted by the fact that the companies did not engage in cold-calling activity that could be harmful to that close relationship and disruptive to these beneficial collaborations."³⁶
- g. Intel defends its Anti-Solicitation agreement with Google in similar ways. It argues that the hiring of its employees by a technical collaborator was

³² Defendant Intuit Inc.'s Response to Plaintiff's Second Set of Interrogatories Directed to Defendant Intuit Inc.(6:17-20)

³³ Defendant Apple Inc.'s Amended Responses to Plaintiff's Second Set of Interrogatories (7:9-13)

³⁴ Defendant Lucasfilm Ltd.'s Supplemental Objections and Responses to Plaintiff's Second Set of Interrogatories (9:1-2, 10:13-15)

³⁵ Defendant Pixar's Supplemental Objections and Responses to Plaintiff's Second Set of Interrogatories (6:27-7:2)

³⁶ Defendant Pixar's Supplemental Objections and Responses to Plaintiff's Second Set of Interrogatories (8:14-17)

seen as “significantly undermin[ing]” trust; “causing significant ill will”; and “had significant negative repercussions on the collaboration.”³⁷

25. Defendants thus argue that the Anti-Solicitation agreements are essential for a successful technical collaboration. If one takes this argument at face value, then a rational company should adopt Anti-Solicitation agreements if and only if undertaking a technical collaboration with another firm. This implies two actions:

- a. Every Anti-Solicitation agreement between two companies should be tied to a corresponding technical collaboration.
- b. Every technical collaboration should have an Anti-Solicitation agreement in place between the two companies.

The evidence, however, shows that the Defendants’ adoption of Anti-Solicitation agreements hardly mirrors the behavior of a company whose purpose in using Anti-Solicitation Agreements is to foster the success of technical collaborations.

26. First, some Defendants entered (or attempted to enter) into Anti-Solicitation agreements without a corresponding technical collaboration.

- a. In August of 2007, Jobs threatened Palm CEO Ed Colligan that “if Palm did not agree to such an arrangement, Palm could face lawsuits alleging infringement of Apple’s many patents.” Colligan declined the invitation via email that same month.³⁸ Nothing in the exchange between Jobs and Colligan addresses any technical collaboration either existing or contemplated.
- b. In March 2008, Google executives discussed establishing an Anti-Solicitation agreement with Facebook.³⁹ Bill Campbell pressed Google to seek a “truce” with Facebook.⁴⁰ He stated: “there was a sense that if we had a mutual nonrecruiting or, you know, let’s say a non-cold-calling arrangement, it would be good.”⁴¹ The invitation was extended by Jonathan Rosenberg of Google, who “expressed concerned about what he described as the perceived rate at which Facebook could hire employees

³⁷ Intel’s Objections and Amended and Supplemented Responses to Plaintiff’s Second Set of Interrogatories (13:3-15:8)

³⁸ Declaration of Edward T. Colligan (2:7-17)

³⁹ Exhibit 614

⁴⁰ Exhibit 667

⁴¹ Deposition of William Campbell (142:17-20)

from Google.” Facebook COO Sheryl Sandberg however “declined at that time to limit Facebook’s recruitment or hiring of Google employees.”⁴² Rosenberg remarked that “I don’t feel that I had a satisfactory response from Sheryl [Sandberg] in achieving my objective...to reduce the overall number of employees that [Facebook] was hiring from Google.”⁴³ Neither Campbell nor Rosenberg mentions a technical collaboration as a driver of seeking an Anti-Solicitation agreement with Facebook.

27. Second, some Defendants failed to establish Anti-Solicitation agreements at the time they undertook important technical collaborations. This is evident both in technical collaborations that long pre-date the establishment of an Anti-Solicitation agreement as well as collaborations with non-Defendant companies.
 - a. In its interrogatory response, Adobe claims to have executed more than 200 technical collaborations with Defendant Apple over a nearly thirty-year period. As described above, however, the Anti-Solicitation agreement between Adobe and Apple was not consummated until May of 2005. The email exchange between the CEOs of the two companies indicates the prior absence of an Anti-Solicitation agreement. Chizen initially responds by saying “I thought we agreed not to recruit any senior level employees...I would propose we keep it this way” but then backs down when Jobs threatens to recruit “any Adobe employee who is not a Sr. Director of VP.”⁴⁴ Acquiesces Chizen, “I’d rather agree NOT to actively solicit any employee from either company...if you are in agreement I will let my folks know.”⁴⁵ Adobe’s vice president of Human Resources announces the next day to her team of recruiters that “Bruce and Steve Jobs have an agreement that we are not to solicit ANY Apple employees, and vice versa.”⁴⁶ The CEO exchange coupled with the communication to HR makes clear two aspects of the May 2005 Anti-Solicitation agreement.
 - i. First, it represented a clear change in practice within Adobe. Prior to Bruce Chizen, Adobe co-founder John Warnock served as CEO since the inception of the company and covering the period of during which Apple and Adobe claim to have had many

⁴² Declaration of Non-Party Sheryl Sandberg (2:2-8)

⁴³ Deposition of Jonathan Rosenberg (132:2-9)

⁴⁴ Exhibit 223

⁴⁵ Exhibit 223

⁴⁶ Exhibit 225

collaborations. In his deposition, Warnock said “There was a contract written in late 1983 between Apple and Adobe.”⁴⁷ When asked whether that contract contained an agreement not to recruit each other’s employees, Warnock responded, “I don’t believe so.”⁴⁸

ii. Second, the timing of this Anti-Solicitation agreement indicates that many of the technical collaborations between Apple and Adobe occurred without Anti-Solicitation agreements, including a period when “essentially all of Adobe’s revenue came from Apple, and all of its resources were devoted to the companies’ shared vision.”⁴⁹ Both Defendants’ interrogatory responses suggest that these were very successful collaborations, even though the 2005 Anti-Solicitation agreement had not yet been entered into.

b. There are likewise many technical collaborations with non-Defendants that are nonetheless unsupported by Anti-Solicitation agreements. While it is impossible to inventory all such collaborations, non-Defendant Microsoft may serve as a suitable counterexample. At least two of the Defendants have had multiple and/or long-term technical collaborations with Microsoft, but these are not mentioned in any of the Defendants’ interrogatory responses. If Anti-Solicitation agreements were so critical to the successful of technical collaborations, one might have expected such between Microsoft and either of Intel and Apple.

i. Intel has been the dominant supplier of microprocessors for PCs with the Microsoft Windows operating system (hence the “wintel” nickname), requiring a long-term technical collaboration to ensure the success of the platform. As recently as 2009, the two companies held a joint press conference to explain that the two companies kicked off their collaboration on Windows 7 “the day after Vista shipped” (January 30, 2007, i.e., more than two years

⁴⁷ Deposition of John Warnock (24:24-25)

⁴⁸ Deposition of John Warnock (24:19-25:17)

⁴⁹ Defendant Adobe Systems Inc.’s Amended Response to Plaintiff’s Second Set of Interrogatories Directed to Defendant Adobe Systems Inc. at 5

before the DOJ ruling) including a “timer coalescing” API that keeps the CPU in a low-power state as long as possible.⁵⁰

- ii. Apple might seem a less obvious collaborator of Microsoft than Intel, but the competitors have found multiple occasions to collaborate starting in 1997, when Apple took a \$150MM investment from Microsoft. Steve Jobs announced at MacWorld that the two companies would “work together on Java” and that Microsoft’s Internet Explorer would become the default browser for its Macintosh line of computers, not unlike the collaboration Apple described as necessary to make Google the default search engine in its Safari browser or Google Maps the default mapping application on the iPhone. In 2003, Apple released its iTunes music application for Windows,⁵¹ which required an iPod to be detected via a USB connection whereas Macintosh computers used FireWire ports. Moreover, just as Apple collaborated with Adobe to ensure that its software ran properly on Macintosh, Microsoft Office required substantial adaptation since its original 4.2 release in 1994 as customers complained it was not “Mac-like” enough.⁵²

- 28. Third, the individuals who managed and negotiated the collaborations deny any knowledge that the Anti-Solicitation agreements existed, and deny that the issue of Anti-Solicitation agreements ever came up during negotiations over collaborations. For example, Google engineering executive Alan Eustace reported no knowledge of Anti-Solicitation agreements associated with the multiple collaborations he managed with Apple. In 2007, Eustace took over primary responsibility for the relationship with Apple,⁵³ including the placement of Google Maps on the iPhone and Google as the primary search engine in the Safari browser. Eustace said that neither contract contained an Anti-Solicitation

⁵⁰ Poeter, D. “Microsoft, Intel Tout Their Collaboration on Windows 7.” *CRN*. September 1, 2009. Available at <http://www.crn.com/blogs-op-ed/the-channel-wire/219500867/microsoft-intel-tout-their-collaboration-on-windows-7.htm>, accessed 18 October 2013.

⁵¹ McLaughlin, K. “Microsoft and Apple Actually Don’t Loathe Each Other, and Here Are Examples of Them Working Together.” *Business Insider*, 28 June 2013. Available at <http://www.businessinsider.com/how-microsoft-and-apple-work-together-2013-6>, accessed 18 October 2013

⁵² “Office Macintosh Edition: a History of “Mac-First””. Microsoft press release, April 26. 1999. Available at <http://www.microsoft.com/en-us/news/features/1999/04-26macoffice.aspx>, accessed 18 October 2013

⁵³ Deposition of Alan Eustace (55:15-19)

agreement.⁵⁴ When asked whether even the negotiation surrounding these contracts raised the issue of Anti-Solicitation, Eustace replied “I do not recall any provision that had anything to do with cold calling in that agreement.”⁵⁵ With respect to Apple, then-COO Tim Cook also denied knowledge of any Anti-Solicitation agreements: “I’m not aware of an agreement that Apple had with Google”⁵⁶ regarding cold calling. This seems plausible, given that by Cook’s account “I believe the entire time I was COO, was that HR reported in to the CEO, who was Steve [Jobs].”⁵⁷ If so, then Cook might well not have been aware of email communications between CEO Jobs and HR head Danielle Lambert regarding the Anti-Solicitation agreements⁵⁸ even though he as COO was responsible for the success of the collaboration. The fact that the COO of Apple apparently had no knowledge of these illicit agreements that Apple now asserts were somehow key to successful collaborations speaks volumes.

29. Thus the record shows that the Anti-Solicitation agreements did not have anything to do with these supposed collaborations. They were established for other reasons including to exert market power over a competitor, as in the case of Apple threatening Palm with patent-infringement lawsuits if they did not agree, or in order to avoid losing employees to another company, such as Google’s entreaty to Facebook or Intuit’s request of Google. Moreover, it is apparent that social factors having nothing to do with technical collaborations played a significant role in the adoption of the Anti-Solicitation agreements.

- a. All but one of the Anti-Solicitation agreements existed between two companies sharing an owner, CEO, board member, or key advisor. Apple CEO Steve Jobs was also CEO of Pixar (with whom it had an Anti-Solicitation agreement), which he had purchased from Lucasfilm (with which Pixar had a long-standing Anti-Solicitation agreement). Intel CEO Paul Otellini served on Google’s board (with which it had an Anti-Solicitation agreement), and whose CEO Eric Schmidt served on Apple’s board (with which it had an Anti-Solicitation agreement).

⁵⁴ Deposition of Alan Eustace (116:6-19; 119:12-120:4)

⁵⁵ Deposition of Alan Eustace (120:11-18) (regarding Search contract negotiations); (118:6-22) (regarding Maps contract negotiations)

⁵⁶ Deposition of Tim Cook (17:2-18:1)

⁵⁷ Deposition of Tim Cook (39:4-5)

⁵⁸ Exhibits 139, 563, and 861

- b. Intuit Chairman Bill Campbell served as an advisor to Google CEO Eric Schmidt, attending weekly meetings held by Google executive management.⁵⁹⁶⁰
- c. Moreover, the personal relationships and frequency of contact between certain Defendants extends beyond occasional board meetings. Intuit Chairman Bill Campbell describes Apple CEO Steve Jobs as a “[v]ery, very, very good friend.”⁶¹
- d. In his deposition, upon stating that he asked Google VP People Shona Brown to add Intuit to its do-not-call list, Chairman Bill Campbell explained the circumstances surrounding his request: “I was quite *embarrassed* by that with my own company, that I was there in such an intimate position helping Google and Google was recruiting—cold-calling our employees. So I asked them if they would stop doing that” (emphasis added).⁶² In a similar vein, Apple argued that Anti-Solicitation agreements “avoid creating an actual or apparent conflict of interest or any appearance of impropriety arising from a Board member’s dual roles at different companies.”⁶³ Helping a board member or key advisor avoid the appearance of impropriety—or personal embarrassment—is far different from ensuring the success of a technical collaboration.

30. The requirements of the DOJ consent decree offer multiple provisions for distinguishing Anti-Solicitation agreements ancillary to legitimate collaborations:⁶⁴

- a. *identify, with specificity, the agreement to which it is ancillary.*

Defendants have produced no ex ante evidence of Anti-Solicitation agreements (i.e., written contracts or emails) stating that such agreement was tied to a specific technical collaboration. Rather, the emails documenting such agreements are general and do not refer to a specific project or subset of employees affected. Moreover, Defendants memorialized their collaborations in written contracts, many of which I

⁵⁹ Deposition of William Campbell (21:3-22:10)

⁶⁰ Deposition of Shona Brown (166:21-23)

⁶¹ Deposition of William Campbell (20:23)

⁶² Deposition of William Campbell (28:23-29:10)

⁶³ Defendant Apple Inc.’s Amended Responses to Plaintiff’s Second Set of Interrogatories (10:16-21)

⁶⁴ Stipulation to Enter Final Judgment (5)

have reviewed. I understand that these contracts do not include any reference to the Anti-Solicitation Agreements at issue. For example, the licensing agreement for Google Mail to Apple (signed by Kent Walker and Phil Schiller of Google and Apple, respectively) says nothing regarding recruiting restrictions.⁶⁵ The only mention of employee governance I could find in the contracts I reviewed is a section describing the lack of collective bargaining agreements among the Lucasfilm employees who would join Pixar, and a list of said employees.⁶⁶ Instead, the evidence demonstrates that the Defendants' senior executives entered into the Anti-Solicitation Agreements separately, in order to eliminate competition for their employees, not to facilitate collaborations.

- b. *be narrowly tailored to affect only employees who are anticipated to be directly involved in the agreement, and identify with reasonable specificity the employees who are subject to the agreement*

The Anti-Solicitation agreements applied to all employees of both companies. As an example, the Apple-Google agreement had "stopped all efforts to recruit anyone from Apple"⁶⁷ and Apple notified its recruiters that they should "honor our side of the deal."⁶⁸ The 2005 email from Adobe HR activating the Anti-Solicitation agreement with Apple states that "Bruce and Steve Jobs have an agreement that we are not to solicit ANY Apple employees, and vice versa."⁶⁹ Workers at those companies during the period of the agreement include a wide variety of employees whom could not reasonably be anticipated to be directly involved in the agreement. Moreover, Apple recruiter Patrick Flynn confirmed that when a company was added to the do-not-call list, all of its subsidiaries were also added to the list.⁷⁰

The aberrant nature of the Anti-Solicitation agreements is further demonstrated by contrasting them with no-solicit agreements that were discussed as part of an actual potential collaboration. For example, Sheryl Sandberg (while at Google) attempted a collaboration between Google and Intuit, as a precursor to which in April 2006 the former agreed not to

⁶⁵ GOOG-HIGH-TECH-00625532

⁶⁶ PIX00087389

⁶⁷ Exhibit 199

⁶⁸ Exhibit 563

⁶⁹ Exhibit 225

⁷⁰ Deposition of Patrick Flynn (112:4-23)

solicit “8 named individuals for a specific period of time – duration of partnership or 12 months if partnership does not get consummated.”⁷¹ Independent of whether this collaboration was realized, the two companies later entered into a broad Anti-Solicitation agreement detailed above in which Google agreed not to cold-call any Intuit employees. Sandberg makes explicit that the later decision to add all of Intuit’s employees to Google’s do-not-call list had nothing to do with this earlier agreement and thus was not ancillary to a collaboration as per DOJ requirements.⁷²

c. *contain a specific termination date or event*

None of the Anti-Solicitation agreements contained a termination date but rather appeared to be perpetually effective. Indeed, none of them was terminated prior to the DOJ investigation, as might have been the case if any of them had been time-bound. The lack of any set expiration date further confirms that the purpose was not to facilitate collaboration, but rather to eliminate competition.

d. *be signed by all parties to the agreement, including any modifications to the agreement*

None of the Anti-Solicitation agreements were signed as part of a formal contract but rather were entered into in secret among Defendants’ chief executives and other top-level senior executives, who then actively concealed their existence.

In their interrogatory responses, Defendants listed employees who knew about the Anti-Solicitation agreements or knew about discussions regarding the agreements. None of these responses contain a full list of employees who would be affected, from which it is reasonable to conclude that they were not involved in the negotiations. Rather, only certain senior executives were mentioned. At Adobe, only CEO Bruce Chizen and COO Shantanu Narayan.⁷³ At Intuit, only Chairman Bill Campbell, CEO Brad Smith, and President of Global Business Division Alex Lintner.⁷⁴ Pixar

⁷¹ Exhibit 575

⁷² Declaration of Sheryl Sandberg (1:24-2:1)

⁷³ Defendant Adobe Systems Inc.’s Response to Plaintiffs’ First Set of Interrogatories Re: Identification of Witnesses (March 12, 2012) at 6.

⁷⁴ Defendant Intuit Inc.’s Response to Plaintiffs’ First Set of Interrogatories Re: Identification of Witnesses (March 12, 2012) at 5.

lists Ed Catmull and Steve Jobs.⁷⁵ Google lists seven executives including CEO Schmidt, engineering executive Alan Eustace, Senior Advisor Jonathan Rosenberg, and four Director/SVP-level members of the People Operations team.⁷⁶ Apple lists several people, but each of them has “HR” or “staffing” or “recruiting” in their title; no engineers or other types of employees are mentioned as having been aware of the illicit agreements.⁷⁷ For example, Intel CEO Otellini intended to keep his Anti-Solicitation agreement with Google secret: “We have a handshake ‘no recruit’ between eric and myself. I would not like this broadly known. paul”⁷⁸ Similarly, Google CEO Schmidt expressed a preference that the “Do Not Call” list be described to others “verbally, since I don’t want to create a paper trail over which we can be sued later?”⁷⁹

31. In some cases, Defendants’ own executives admit that their Anti-Solicitation Agreements failed to satisfy the DOJ’s provisions and were halted as a result. For example, James Morris (General Manager of Pixar) said of Lucasfilm, “we had an agreement for a long period of time that we wouldn’t recruit from each other, and we are not doing that anymore. We rescinded that agreement.”⁸⁰ When asked why the agreement was rescinded, Morris stated, “reason is there was a consent decree.”⁸¹ Likewise, in September 2009 after the DOJ began its investigation, Google “remove[d] the Do Not Call list anywhere that it appears.”⁸²
32. Since entering into the consent decree with the DOJ, these Defendants appear to have eliminated the Anti-Solicitation agreements and have abided by the terms of the consent decree. I understand that certain of Defendants’ senior executives confirmed in their depositions that, following the DOJ investigation in 2009, they attended antitrust compliance training and have since not violated the terms of the consent decree.⁸³ Defendants—among the leading and most successful technology

⁷⁵ Defendant Pixar’s Objections and Responses to Plaintiffs’ First Set of Interrogatories Re: Identification of Witnesses (March 2, 2012) at 5.

⁷⁶ Google Inc.’s Responses to Plaintiffs’ First Set of Interrogatories Re: Identification of Witnesses (March 2, 2012) at 9.

⁷⁷ Defendant Apple Inc.’s Responses to Plaintiffs’ First Set of Interrogatories Re: Identification of Witnesses (March 2, 2012) at 8-9.

⁷⁸ Exhibit 202

⁷⁹ Exhibit 181

⁸⁰ Deposition of James Morris (165:13-16)

⁸¹ Deposition of James Morris (103:19-25)

⁸² Exhibit 209; also confirmed in deposition of Shona Brown (239:10-240:16) and Exhibit 635.

⁸³ For example, Exhibit 169 and deposition of James Morris (188:1-189:25), and deposition of Tim Cook (54:4-58:7)

companies in the world—do not appear to have suffered as a result of abiding by the antitrust laws. Apple was the most valuable company in the world for the space of a year, with Google not far behind.⁸⁴ Intuit's stock price has more than doubled since the DOJ consent decree. Moreover, since 2009 these companies have continued to collaborate with each other and with other companies, without company-wide Anti-Solicitation agreements restricting the mobility and compensation of their employees. In September of 2011, Intel announced a technical collaboration with Google to optimize its Atom processor for the Android mobile platform.⁸⁵ Google moreover, despite later competing against Apple's iPhone with Android, in 2012 integrated into its iOS Maps application previously-unavailable features including spoken turn-by-turn driving directions.⁸⁶ Tim Cook, Apple's current CEO, perhaps put it best: "Are we in deep collaboration with anyone? Of course. Yes. And we abide by the consent decree with those."⁸⁷ "The consent decree doesn't prevent people from working together."⁸⁸

VI. Conclusion

33. Based on the documents I have reviewed, my professional experience, and my research on non-compete agreements, I have a number of conclusions expressed in the report, which I also summarize here.
34. The Anti-Solicitation agreements evidenced by the exhibits, depositions, and Defendants' interrogatory responses do not simply represent autonomous choices made by individual companies. Rather, directors, CEOs, advisors, and senior

⁸⁴ Apple's market capitalization exceeded Exxon for a 365-day period starting January 24, 2012. Source: <http://money.cnn.com/2013/01/25/investing/apple-exxon/index.html>. When deducting cash in the bank from market capitalization, Google was more valuable than Apple as of June 2013: <http://money.cnn.com/2013/01/25/investing/apple-exxon/index.html>.

⁸⁵ http://newsroom.intel.com/community/intel_newsroom/blog/2011/09/13/intel-and-google-to-optimize-android-platform-for-intel-architecture

⁸⁶ One might argue that Google's decision to compete against Apple in the mobile phone space was driven by the inability to continue its broad Anti-Solicitation agreement. However, Google launched the first commercially-available Android handset in 2008, well before the consent decree (http://www.gsmarena.com/t_mobile_g1-2533.php). If anything, this episode reconfirms the importance of technical collaborations, as Apple struggled to deliver its own Maps application of quality comparable to what it could obtain by collaborating with Google.

⁸⁷ Deposition of Tim Cook (58:5-7)

⁸⁸ Deposition of Tim Cook (75:1-2)

executives conspired to suppress cold-calling. Internal announcements confirm the reciprocal nature of these agreements.

35. These Anti-Solicitation agreements were not independently arrived at by pairs of firms. Rather, these illegal arrangements were disseminated through a tight network of co-located, interlocking owners, directors, and advisors. The original Pixar-Lucasfilm arrangement was known to Pixar CEO Steve Jobs, who then instigated a similar agreement with Adobe and, though board member Eric Schmidt, with Google. Google then replicated the agreement with the Intel CEO, who sat on its board. Intuit, whose chairman sat on Apple's board and also closely advised Google, requested to be brought into the fold. All of these directors lived in the San Francisco Bay Area, though employees across the companies were affected.
36. Although the Defendants claim that Anti-Solicitation agreements are critical to successful technical collaborations, the evidence does not support this contention. First, Defendants successfully managed essential technical collaborations without Anti-Solicitation agreements. Second, some Defendants attempted to establish Anti-Solicitation agreements with companies where no technical collaboration existed. Third, the people most involved in establishing the collaborations testified they were unaware of the Anti-Solicitation agreements. Hence, Anti-Solicitation agreements cannot be reasonably necessary to technical collaborations. Further, Defendants provide no justification whatsoever for the Anti-Solicitation conspiracy among them. There is none.
37. These Anti-Solicitation agreements were not limited to individuals involved in collaborations but rather extended to all employees of the firms involved. Moreover, and contrary to employee non-compete agreements, the vast majority of these workers (excepting HR recruiters and some senior executives) had no idea that their opportunities to learn of external job opportunities were being restricted in this way.

38. It is clear from the evidence that the Anti-Solicitation agreements were established for the purpose of suppressing compensation. Certain co-conspirators used the pretext of “embarrassment” as justification, while others were clear in their desire to stem the upward pressure on wages or the outward flow of talent to competitors who were growing quickly, with no mention of technical collaborations. As Anti-Solicitation agreements limit the flow of job opportunities to workers, Anti-Solicitation agreements would indeed limit compensation in the way that Defendants’ chief executives hoped they would.

Matthew Marx
October 28, 2013

Exhibit 1: Matthew Marx CV

Matthew Marx

Office Address

Massachusetts Institute of Technology
Sloan School of Management
100 Main Street, E62-478
Cambridge, MA 02142
(617) 253-5539
mmarx@mit.edu, <http://mmarx.scripts.mit.edu>

Home Address

158 Phillips Brooks Road
Westwood, MA 02090
(781) 686-9055

EMPLOYMENT

MIT Sloan School of Management

Cambridge, MA

Mitsui Career Development Professor of Entrepreneurship

2010-present

Assistant Professor of Technological Innovation, Entrepreneurship, and Strategic Management

2009-present

Tellme Networks (acquired by Microsoft)

Mountain View, CA

Vice President, Solutions Delivery

1999-2004

- Hired and led 75-person team that launched speech recognition services handling 1 billion calls per year.
- Grew annualized revenue from \$5M to \$100M. Reported to CEO and presented regularly to board.

SpeechWorks International (completed IPO)

Boston, MA

User Interface Engineer

1994-1999

- Designed and implemented applications for Fortune 500 clients.
- Catalyzed decision to switch company's commercialization strategy from technology licensing to services.

EDUCATION

Harvard University Boston, MA
 Doctor of Business Administration June 2009
 Dissertation Title: Essays on Employee Non-compete Agreements.
 Committee: Lee Fleming (chair), Rakesh Khurana, Josh Lerner

Harvard University Boston, MA
 Master of Business Administration (with Distinction) 2005

Massachusetts Institute of Technology Cambridge, MA
 S.M., Media Arts and Sciences (Motorola Fellow) 1995
 Master's Thesis Title: Toward Effective Conversational Messaging
 Committee: Christopher Schmandt (chair), Pattie Maes, Nicole Yankelovich

Stanford University Stanford, CA
 B.S., Symbolic Systems (with Distinction, Phi Beta Kappa, degree completed in three years)
 1993

PUBLICATIONS

J. Singh and M. Marx. "Geographic Constraints on Knowledge Diffusion: Political Borders vs. Spatial Proximity." *Management Science* (forthcoming).

M. Marx and L. Fleming. "Non-compete Agreements: Barriers to Entry...and Exit?" in J. Lerner and S. Stern, eds., *Innovation Policy and the Economy* 12. (2012)

M. Marx, "The Firm Strikes Back: Non-Compete Agreements and the Mobility of Technical Professionals." *American Sociological Review* 76(5):695-712. (2011)

M. Marx, D. Strumsky, and L. Fleming, "Mobility, Skills, and the Michigan Non-compete Experiment." *Management Science* 55(6):875-889 (lead article). (2009)

L. Fleming and M. Marx, "Managing Inventive Creativity in Small Worlds." *California Management Review* 48(4):6-27. Winner of the Accenture Award for Contribution to Management Practice. (2007)

C. Christensen, M. Marx, and H. Stevenson. "The Tools of Cooperation and Change." *Harvard Business Review* 84(10). (2006)

WORKING PAPERS

M. Marx and D. Hsu. “Technology Commercialization Strategy Dynamics and Entrepreneurial Performance: Evidence from the Speech Recognition Industry.” (Second-round revise & resubmit at *Management Science*)

M. Marx, J. Singh, and L. Fleming, “Does Non-compete Enforcement Create a ‘Brain Drain’?” (under review at *Journal of Law, Economics, and Organization*)

K. Younge and M. Marx, “The Value of Employee Retention: Evidence from a Natural Experiment.” (under review at *Journal of Economics and Management Strategy*)

M. Marx and A. Kacperczyk, 2013. “Revisiting the Small-Firm Effect on Entrepreneurship: Evidence from Dissolutions.” (under review at *Management Science*)

M. Marx, 2013. “Good work if you can get it...again: Non-compete agreements, technical expertise, and staffing small firms.”

M. Marx, 2013. “On a Tight Leash? Venture Capital Staging and Strategic Flexibility.”

M. Marx, 2013. “Co-mobility.”

M. Marx and D. Hsu, 2013. “Strategic “switchbacks”: dynamic commercialization strategies for technology entrepreneurs.”

M. Ewens and M. Marx, 2013. “After the Thrill Is Gone: Investor Intervention in Imperiled Portfolio Companies.”

A. Kacperczyk and M. Marx, 2013. “Firm Failure, Stigma, and Entrepreneurship.”

FELLOWSHIPS AND AWARDS

2013 Ewing Marion Kauffman Foundation Junior Faculty Fellowship in Entrepreneurship (\$40,000)

2011 MIT Sloan Junior Faculty Research Assistance Program Grant (\$33,000)

2011 Edward B. Roberts (1957) Fund, MIT Entrepreneurship Center Fund Grant (\$16,500)

2010-2012 Alvin J. Siteman (1948) Career Development Chair

2010 DRUID Best Dissertation Award

2010 Academy of Management Technology Innovation Management Division Best Dissertation Finalist

2009 Academy of Management Technology Innovation Management Division Best Student Paper Award
2009 Wyss Award from Harvard Business School for Excellence in Doctoral Research
2008 Academy of Management Business Policy and Strategy Division Distinguished Student Paper Award
2007 California Management Review Accenture Award for Contribution to Management Practice
2007-2008 Ewing Marion Kauffman Dissertation Fellowship

TECHNICAL PUBLICATIONS AND PATENTS

U.S. Patent #7,321,856 “Handling of speech recognition in a declarative markup language.” (2008)

U.S. Patent #7,143,039 “Providing menu and other services for an information processing system using a telephone or other audio interface.” (2006)

U.S. Patent #7,140,004 “Method and apparatus for zero-footprint phone application development.” (2006)

U.S. Patent #6,107,696 “System and method for handling a voice prompted conversation.” (2005)

U.S. Patent #6,606,598 “Statistical computing and reporting for interactive speech applications.” (2003)

U.S. Patent #6,173,266 “System and method for developing interactive speech applications.” (2001)

U.S. Patent #6,747,026 “Transcription and reporting system.” (2000)

U.S. Patent #5,995,928 “Method and apparatus for continuous spelling speech recognition with early identification.” (1999)

M. Marx and C. Schmandt. “CLUES: Dynamic Personalized Message Filtering.” *Proceedings of the ACM Conference on Computer Supported Cooperative Work* (1996)

M. Marx and C. Schmandt. “MailCall: Message presentation and navigation in a non-visual environment.” *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (1996)

N. Yankelovich, G.A. Levow, and M. Marx. "Designing SpeechActs: Issues in Speech User Interfaces." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (1995)

M. Marx and C. Schmandt. "Putting People First: Specifying Proper Names in Speech Interfaces." *Proceedings of the 7th annual ACM symposium of User Interface Software and Technology* (1994)

M. Marx and C. Schmandt. "Reliable Spelling Despite Unreliable Letter Recognition." *Proceedings of the American Voice Input/Output Society* (1994)

GOVERNMENT TESTIMONY

M. Marx. "Testimony regarding MA house Bill H1794, An Act Regarding Noncompetition Agreements." Massachusetts Joint Committee on Labor and Workforce Development, Boston MA, 15 September 2011.

M. Marx. "Testimony regarding MA House Bills H1794 and H1799, Acts Regarding Noncompetition Agreements." Massachusetts Joint Committee on Labor and Workforce Development, Boston MA, 7 October 2009.

TEACHING EXPERIENCE AND MATERIALS

15.394, Dilemmas in Founding New Ventures. Ratings were 4.9/5.0 and 4.7/5.0 for two sections taught Spring 2011. Overhauled prior syllabus and introduced simulation on firing employees, since adopted at Wharton and Harvard.

Frequent lecturer in executive education and the Trust Center for MIT Entrepreneurship.

Lee Fleming and Matt Marx. "Barry Riceman at NetD (A), (B), and (TN)." Harvard Business School Case 606-090.

OTHER ACADEMIC EXPERIENCE AND SERVICE

Guest Associate Editor for Management Science. Ad-hoc reviewer for Management Science, American Sociological Review, Review of Economics and Statistics, Journal of Law and Economics, Organization Science, Review of Industrial Organization, Research Policy, California Management Review, Journal of Business Venturing.

Organizing Committee, 2011 Harvard/MIT Strategy Research Conference.

MIT Sloan Undergraduate Program Committee, 2010-2013.

Organized MIT Sloan Behavioral and Policy Sciences Junior Faculty Retreat, 2010 and 2011.

PRESENTATIONS

Discussant/panelist

- OECD Symposium on “A Policy Framework for Knowledge-Based Capital.” December 2012.
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, November 2012.
- NBER Summer Institute Intellectual Property Policy and Innovation Workshop, July 2012
- Boston Bar Association Symposium on Employee Non-Compete Agreements, July 2012
- CCC Doctoral Student Conference, April 2012
- NBER Productivity, Innovation, and Entrepreneurship Working Group, March 2012
- Labor and Employment Relations Association Annual Meeting, January 2012
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, September 2011
- Boston Bar Association Symposium on Employee Non-compete Agreements, July 2011
- NBER conference on Innovation Policy and the Economy. National Press Club, April 2011.
- Boston University Law School, March 2011
- Boston Bar Association Symposium on Employee Non-compete Agreements, July 2010

“Co-mobility”

- University of Chicago Junior Faculty Organization Theory Conference, October 2013.

“Technology Commercialization Strategy Dynamics and Entrepreneurial Performance: Evidence from the Speech Recognition Industry”

- University of Toronto Rotman School of Management Strategy Department Seminar, October 2013
- Industry Studies Association Annual Meeting, May 2013.
- Darden/Cambridge Entrepreneurship Conference, May 2013
- Duke Fuqua School of Business Strategy Conference, October 2012
- Carnegie Mellon University, SETChange department seminar series, October 2012
- West Coast Research Symposium, September 2012
- Academy of Management Annual Meeting, August 2012

- Queen's University Conference on the Economics of Innovation and Entrepreneurship, June 2012
- Atlanta Competitive Advantage Conference, May 2012
- London Business School Sumantra Ghoshal Conference, May 2012
- University of Chicago Organizations and Markets Department Seminar, April 2012
- The Wharton School Management Department Seminar, University of Pennsylvania, March 2012
- BYU-University of Utah Winter Strategy Conference, March 2012
- INFORMS annual meeting, November 2011
- Harvard Business School Strategy Conference, November 2011

“Patent Citations and the Geography of Knowledge Spillovers: Disentangling the Role of State Borders, Metropolitan Boundaries and Distance.”

- London Business School, Strategy & Entrepreneurship Department, November 2012
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, November 2012.
- Boston University Strategy & Innovation Department, August 2012
- Academy of Management Annual Meeting, August 2012
- Sloan Economic Sociology Working Group, July 2011

“The market valuation of strategic human capital: evidence from a natural experiment.”

- Stanford Organizational Behavior Department Seminar, October 2012
- Berkeley Innovation Seminar, April 2012

“Regional Disadvantage? Non-compete Enforcement and Brain Drain”

- UCLA Anderson Policy Group seminar, October 2011.
- Stanford Institute for Economic Policy Research seminar, October 2011
- The Wharton School, University of Pennsylvania Management Department seminar, October 2011
- Olin School, Washington University in St. Louis, Organizations Department seminar, October 2011
- Harvard Business School, Entrepreneurial Management Department seminar, September 2011
- European School of Management & Technology Department seminar, September 2011
- Mobility and Competition Clause Workshop, Ludwigs-Maximilian-Universitaet, August 2011
- Academy of Management Annual Meeting, August 2011
- University of Virginia Darden Entrepreneurship Conference, May 2011
- NBER Summer Institute, Technology Policy and the Economy, July 2010.

- University of Maryland Entrepreneurship Conference, April 2010
- Georgia Tech Roundtable for Engineering Entrepreneurship Research Conference, November 2009
- Technology Transfer Society Annual Meeting, October 2009
- HEC Workshop on Entrepreneurial Entry, September 2009
- Wharton Operations and Information Management Department seminar, September 2009
- Association of American Geographers Annual Meeting, April 2008
- NBER Productivity Lunch, September 2009.

“The Firm Strikes Back: Non-compete Agreements and the Mobility of Technical Professionals”

- American Sociological Association Annual Meeting, August 2010
- University of Oregon West Coast Research Symposium, August 2010
- Eastern Sociological Society annual meeting, March 2010
- NBER Entrepreneurship Working Group Summer Institute, July 2009
- Wharton People & Organizations Conference, June 2009
- Carnegie Mellon / Catholic University of Portugal Entrepreneurship Research conference, January 2009

“On a Short Leash: New Organizations, New Strategies, and Venture Capital”

- Academy of Management Meeting, August 2008

“Good Work If You Can Get It: Non-competes and Ex-employees.

- NBER Summer Institute Entrepreneurship working group, July 2009

“Mobility, Skills, and the Michigan Non-compete Experiment”

- CCC Doctoral Student Consortium, April 2008
- George Washington University Law School Department seminar, September 2007
- Academy of Management Annual Meeting, August 2007
- Wharton Technology Mini-Conference, April 2007
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“Mental Borders.” *Slate*, October 2013.

“In bid to keep entrepreneurs, Massachusetts moves to ban non-competes.” *Gigaom*, September 2013.

“Companies Loosen the Handcuffs on Non-competes.” *Wall Street Journal*, August 2013.

“Tide turning against use of non-compete agreements in Mass.” *Boston Business Journal*, August 2013.

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"Stop Enforcing Non-Competes." *Inc. Magazine*, 1 July 2010.

"Industry veterans share their dealings with non-compete agreements." *Mass High Tech*, 7 October 2009.

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Exhibit 2: Documents relied upon in the preparation of this report

Academic Articles

Garmaise, Mark, “The Ties That Truly Bind: Noncompetition Agreements, Executive Compensation, and Firm Investment,” *Journal of Law, Economics, and Organization*, 27(2):376-425.

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Marx, Matt, “The Firm Strikes Back: Non-compete Agreements and the Mobility of Technical Professionals.” *American Sociological Review* 76(5):695-712.

McLaughlin, K. “Microsoft and Apple Actually Don’t Loathe Each Other, and Here Are Examples of Them Working Together.” *Business Insider*, 28 June 2013. Available at <http://www.businessinsider.com/how-microsoft-and-apple-work-together-2013>, accessed 18 October 2013.

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Poeter, D. “Microsoft, Intel Tout Their Collaboration on Windows 7.” *CRN*. September 1, 2009. Available at <http://www.crn.com/blogs-op-ed/the-channel-wire/219500867/microsoft-intel-tout-their-collaboration-on-windows-7.htm>, accessed 18 October 2013.

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Amended Answer to Consolidated Plaintiffs’ Amended Complaint, Adobe (July 5, 2012), Docket No. 170.

Amended Answer to Consolidated Amended Complaint, Intel (July 5, 2012), Docket No. 169.

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¹ Unless otherwise specified, all documents are from *In re High-Tech Employees Antitrust Litigation*, 11-cv-2509 (N.D. Cal.)

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Plaintiffs' Notice of Motion and Motion for Class Certification, And Memorandum of Law in Support, Docket No. 187.

Plaintiffs' Consolidated Reply In Support of Motion for Class Certification, Docket No. 247.

Plaintiffs' Supplemental Motion and Brief In Support of Class Certification, Docket No. 418.

Plaintiffs' Reply In Support of Supplemental Class Certification Motion, Docket No. 455.

Declarations

Declaration of Edward T. Colligan (August 7, 2012)

Declaration of Non-Party Sheryl Sandberg (May 17, 2013)

Depositions

Deposition of Mark Bentley, August 23, 2012

Deposition of Sergey Brin, March 19, 2013

Deposition of Shona Brown, January 30, 2013

Deposition of William Campbell, February 5, 2013

Deposition of Ed Catmull, January 24, 2013

Deposition of Bruce Chizen, March 15, 2013
 Deposition of Tim Cook, March 21, 2013
 Deposition of Alan Eustace, February 27, 2013
 Deposition of Patrick Flynn, April 3, 2013
 Deposition of Arnon Geshuri, August 17, 2012
 Deposition of Danielle Lambert, October 2, 2012
 Deposition of Edward Leamer, October 26, 2012
 Deposition of George Lucas, March 28, 2013
 Deposition of Donna Morris, August 21, 2012
 Deposition of James Morris, August 3, 2012
 Deposition of Jonathan Rosenberg, March 13, 2013
 Deposition of Eric Schmidt, February 20, 2013
 Deposition of Deborah Streeter, April 5, 2013
 Deposition of Jan Van Der Voort, February 5, 2013
 Deposition of John Warnock, March 29, 2013
 Deposition of Pamela Zissimos, November 13, 2012

Deposition Exhibits

<u><i>Exh. Number</i></u>	<u><i>Bates Number</i></u>
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139	[PIX00004883]
161	[PIX00003419]
163	[PIX00015306]
169	[no Bates Stamp, from Deposition of James Morris]
173	[GOOG-HIGH-TECH-00193034]
176	[GOOG-HIGH TECH-00000004]
177	[GOOG-HIGH-TECH-00058573]
178	[GOOG-HIGH-TECH-00058626]
181	[GOOG-HIGH-TECH-00058410]
182	[GOOG-HIGH-TECH-00008283]
183	[GOOG-HIGH-TECH-00008342]

<u>Exh. Number</u>	<u>Bates Number</u>
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192	[GOOG-HIGH-TECH-00000107]
199	[231APPLE002140]
202	[40026DOC000011]
209	[GOOG-HIGH-TECH-00057353]
223	[231APPLE002143]
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250	[231APPLE006876]
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279	[231APPLE002151]
303	[Adobe_052404]
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420	[PIX00006025]
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575	[GOOG-HIGH-TECH-00058850]
597	[GOOG-HIGH-TECH-0056882]
608	[GOOGLE-HIGH-TECH-00255349]
614	[GOOG-HIGH-TECH-00379327]
616	[GOOG-HIGH-TECH-00210242]
625	[GOOG-HIGH-TECH-00194721]
635	[GOOG-HIGH-TECH-00252681]
648	[GOOG-HIGH-TECH-00265514]
650	[GOOG-HIGH-TECH-00265638]
651	[GOOG-HIGH-TECH-00058868]

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668	[GOOG-HIGH-TECH-00248336]
669	[231APPLE065002]
690	[LFL00016640]
861	[231APPLE095700]
872	[GOOG-HIGH-TECH-00264994]
916	[INTUIT_016652]
1306	[PIX0012996]
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1868	[GOOG-HIGH-TECH-00550729]
1869	[GOOG-HIGH-TECH-00550725]
1870	[GOOG-HIGH-TECH-00550726]
1871	[GOOG-HIGH-TECH-00061052]
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Declaration Exhibits

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23	Harvey Decl. [GOOG-HIGH-TECH-00248336]
27	Harvey Decl. [76592DOC015613]
17	Shaver Decl. [231APPLE002140]
27	Shaver Decl. [GOOG-HIGH TECH-00007725]
29	Shaver Decl. [GOOG-HIGH TECH-00008283]
37	Shaver Decl. [GOOG-HIGH TECH-00056790]
45	Shaver Decl.[GOOG-HIGH-TECH-00193360]
46	Shaver Decl. [GOOG-HIGH-TECH-00193377]

<u><i>Exh. Number</i></u>	<u><i>Description</i></u>
48	Shaver Decl. [GOOG-HIGH-TECH-00194984]
49	Shaver Decl. [GOOG-HIGH TECH-00196286]
58	Shaver Decl. [INTUIT_000013]
59	Shaver Decl. [INTUIT_039098]
61	Shaver Decl. [PIX00000229]
67	Shaver Decl. [PIX00006023]

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Expert Witness Report of Kevin F. Hallock, May 10, 2013.

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Reply Expert Report of Edward E. Leamer, Ph.D., December 10, 2012.

Supplemental Expert Report of Edward E. Leamer, Ph.D., May 10, 2013.

Rebuttal Supplemental Expert Report of Edward E. Leamer, Ph.D., July 12, 2013.

Expert Report of Professor Kevin M. Murphy, November 12, 2012.

Supplemental Expert Report of Professor Kevin M. Murphy, June 21, 2013.

Expert Report of Kathryn Shaw, Ph.D. June 21, 2013.

Job Lists

Job Titles List (technical class positions)

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Defendant Adobe Systems Inc.'s Response to Plaintiffs' First Set of Interrogatories Re:

Identification of Witnesses (March 12, 2012).

Defendant Adobe Systems Inc.'s Amended Response to Plaintiff's Second Set of Interrogatories

Directed to Defendant Adobe Systems Inc. (March 19, 2012).

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Intel's Objections and Amended and Supplemented Responses to Plaintiff's Second Set of Interrogatories (March 12, 2013).

Defendant Intuit Inc.'s Response to Plaintiffs' First Set of Interrogatories Re: Identification of Witnesses (March 12, 2012).

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Plaintiff Siddharth Hariharan's Interrogatory Responses (March 28, 2012).

Plaintiff Brandon Marshall's Interrogatory Responses (March 28, 2012).

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Plaintiffs' Second Interrogatories Directed to Intuit (February 10, 2012).

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Adobe Systems' Memorandum on Adobe-Apple partnership and Ancillary Non-Solicitation Policy (January 13, 2010)

Apple's White Paper Submission to the Department of Justice (January 19, 2010)

Google's Do Not Cold Call List – Submission to U.S. Department of Justice (January 18, 2010)

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Other Documents

231APPLE003854

231APPLE108086

231APPLE116655

231APPLE123280

231APPLE124988

231APPLE130883

231APPLE131137

231APPLE132410

231APPLE132410

231APPLE132589

231APPLE132589

231APPLE133899

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Adobe_110504

Adobe_112028

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PIX00002193

PIX00002219

PIX00087389

Exhibit B

In The Matter Of:

HIGH-TECH EMPLOYEE ANTITRUST LITIGATION

MARX, MATTHEW - Vol. 1
November 15, 2013

MERRILL CORPORATION

LegalLink, Inc.

20750 Ventura Boulevard
Suite 205
Woodland Hills, CA 91364
Phone: 818.593.2300
Fax: 818.593.2301

MATTHEW MARX - 11/15/2013

IN THE UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

--oOo--

IN RE: HIGH-TECH EMPLOYEE)	
ANTITRUST LITIGATION,)	
)	
)	Master Docket No.
)	11-CV-2509-LHK
)	
THIS DOCUMENT RELATES TO:)	
)	
ALL ACTIONS)	
_____)	

DEPOSITION OF

MATTHEW MARX

NOVEMBER 15, 2013

REPORTED BY: SARAH LUCIA BRANN, CSR 3887

MATTHEW MARX - 11/15/2013

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I N D E X

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Exhibit 3 Article entitled "Mobility, 46
Skills, and the Michigan

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Non-Compete Experiment" by Matt

17

Marx, Deborah Strumsky, and

18

Lee Fleming

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Exhibit 4 Article entitled "Noncompete 46

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Agreements: Barriers to Entry

21

... and Exit?" by Matt Marx and

22

Lee Fleming

23

Exhibit 5 Article entitled "The Firm 46

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Strikes Back: Non-compete

25

Agreements and the Mobility of

26

Technical Professionals" by

27

Matt Marx

28

29

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MATTHEW MARX - 11/15/2013

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1 EXHIBITS MARKED FOR IDENTIFICATION

2 (Continued)

3 No. Description Page

4 Exhibit 6 Article entitled "Ties that 46

5 Truly Bind: Noncompetition

6 Agreements, Executive

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8 Investment" by Mark Garmaise

9 Exhibit 7 Google Inc.'s Supplemental 165

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MATTHEW MARX - 11/15/2013

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FOR THE PLAINTIFF CLASS:

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Deposition of MATTHEW MARX, taken by the
Defendants, at 560 Mission Street, 27th Floor, San
Francisco, California, commencing at 9:07 a.m., on
November 15, 2013, before SARAH LUCIA BRANN, CSR,
pursuant to Notice.

--oOo--

A P P E A R A N C E S

LIEFF CABRASER HEIMANN & BERNSTEIN
275 Battery Street, 29th Floor
San Francisco, California 94111-3339
415.956.1000
By: DEAN M. HARVEY, Attorney at Law
dharvey@lchb.com

JOSEPH SAVERI LAW FIRM
505 Montgomery Street, Suite 625
San Francisco, California 94111
415.500.6800
By: JAMES G. B. DALLAL, Attorney at Law
jdallal@saverilawfirm.com

FOR DEFENDANT INTEL CORPORATION:

MUNGER, TOLLES & OLSON LLP
355 South Grand Avenue, 35th Floor
Los Angeles, California 90071-1560
213.683.9100
By: BRADLEY S. PHILLIPS, Attorney at Law
brad.phillips@mto.com

MATTHEW MARX - 11/15/2013

5

1 A P P E A R A N C E S

2 (Continued)

3 FOR DEFENDANTS ADOBE SYSTEMS INC. and INTUIT, INC.:

4 JONES DAY
5 555 California Street, 26th Floor
6 San Francisco, California 94104
7 415.626.3939
8 By: ROBERT A. MITTELSTAEDT, Atty. at Law
9 ramittelstaedt@jonesday.com

10 FOR DEFENDANT GOOGLE INC.:

11 MAYER BROWN LLP
12 Two Palo Alto Square
13 3000 El Camino Real, Suite 300
14 Palo Alto, California 94306-2112
15 650.331.2000
16 By: LEE H. RUBIN, Attorney at Law
17 lrubin@mayerbrown.com

18 KEKER & VAN NEST LLP
19 633 Battery Street
20 San Francisco, California 94111-1809
21 415.391.5400
22 By: JUSTINA SESSIONS, Attorney at Law
23 jsessions@kvn.com

24 FOR DEFENDANT APPLE, INC.:

25 O'MELVENY & MYERS LLP
Two Embarcadero Center, 28th Floor
San Francisco, California 94111
415.984.8700
By: MICHAEL F. TUBACH, Attorney at Law
mtubach@omm.com

ALSO PRESENT:

TED HOPPE, Videographer

--oOo--

24

25

MATTHEW MARX - 11/15/2013

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1 SAN FRANCISCO, CALIFORNIA; FRIDAY, NOVEMBER 15, 2013

2 9:07 A.M.

3 --oOo--

4 P R O C E E D I N G S

5 THE VIDEOGRAPHER: Very good. Tape is
6 rolling, so let's begin. Here begins Volume I,
7 Videotape Number 1, in the deposition of Matthew
8 Marx in regards to High Tech Employee Antitrust
9 Litigation in the United States District Court,
10 Northern District of California, San Jose Division,
11 master docket number 11-CV-2509-LHK.

12 Today's date is November 15, 2013. The
13 time on the video monitor is 9:07. The video
14 operator today is Ted Hoppe, a notary public
15 contracted by Merrill Court Reporting, San
16 Francisco, California. This videotaped deposition
17 is taking place at 560 Mission Street in San
18 Francisco.

19 Counsel, could you please voice identify
20 yourselves for the record.

21 MR. PHILLIPS: Brad Phillips on behalf of
22 Intel.

23 MR. MITTELSTAEDT: Bob Mittelstaedt for
24 Adobe.

25 MR. TUBACH: Michael Tubach, for Apple.

MATTHEW MARX - 11/15/2013

7

1 MS. SESSIONS: Justina Sessions for
2 Google.

3 MR. DALLAL: James Dallal for the
4 plaintiffs.

5 MR. HARVEY: Dean Harvey of Lief
6 Cabraser, for the plaintiffs.

7 THE VIDEOGRAPHER: Very good.

8 Sarah, could you please swear the witness
9 in?

10 MATTHEW MARX

11
12 called as a witness, who, having been first duly
13 sworn, was examined and testified as follows:

14 THE VIDEOGRAPHER: Please proceed.

15 EXAMINATION BY MR. PHILLIPS

16 MR. PHILLIPS: Q. Good morning, Dr. Marx.
17 Have you ever had your deposition taken before?

18 A. No. This would be my first time.

19 Q. Have you spoken with counsel for the
20 plaintiffs about the deposition procedure?

21 A. Do you mean in preparation for today?

22 Q. Yes.

23 A. I did.

24 Q. Do you have any questions about the
25 procedure we are going to follow today?

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1 minor changes.

2 Q. Is the copy -- the CV that was attached to
3 your report more current than that version?

4 A. No, it's not more current.

5 Q. Is there anything significant you think
6 should be added to Exhibit 1 for completeness?

7 A. No, I think a title of a paper has changed
8 and -- but that's not material, I don't think.

9 The other thing, although I probably
10 wouldn't put this on here, is I have been told I
11 will be promoted to associate professor. But that's
12 not effective yet. So I think this is a reasonable
13 CV to work from.

14 Q. Which paper's title was changed?

15 A. Let's see. One of the working papers. So
16 the first working paper we have added a coauthor,
17 Joshua Gans. And the title of the paper is now
18 "Dynamic Commercialization Strategies for Disruptive
19 Technologies."

20 Q. Do you have a degree in economics?

21 A. I do not have a degree in economics.

22 Q. Have you ever taught economics?

23 A. No, I do not teach economics.

24 Q. Have you studied industrial organization?

25 A. I have read papers about industrial

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1 organization in classes I have taken. I would not
2 consider myself an expert in that field, though.

3 Q. And you have never taught industrial
4 organization, correct?

5 A. That would be correct.

6 Q. Have you studied antitrust economics?

7 A. I -- no, I have not studied antitrust
8 economics, although in my work on non-compete
9 agreements I have read a reasonable amount of
10 material that touches on antitrust topics, and I --
11 including papers about antitrust actions in the
12 railroad industry in the 1900s. So I --

13 Q. Other than with respect --

14 MR. HARVEY: Sorry. Could you please
15 finish your answer?

16 THE WITNESS: So I am not entirely
17 unfamiliar. But that's the end of the answer.

18 MR. PHILLIPS: Q. Other than with respect
19 to non-compete agreements, have you studied
20 antitrust issues?

21 A. No, not substantially.

22 Q. Have you ever testified before, even if
23 not in deposition?

24 A. I have been hired as an expert to
25 ascertain prior art in patent litigation claims, but

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1 that affected those things. And you will see that
2 affected in the report that was submitted.

3 Q. Have you ever been asked before to
4 evaluate whether a conspiracy existed?

5 A. Before this case?

6 Q. Yes.

7 A. I have not.

8 Q. Have you ever taught any courses that
9 related to the existence of antitrust conspiracies?

10 A. I have not.

11 Q. Have you ever published anything that
12 related to the existence of antitrust conspiracies?

13 A. I have not.

14 Q. Did you ever take a class on conspiracies
15 under the antitrust laws?

16 A. I have not taken a class on that, although
17 I have read academic articles about that, including
18 the one I mentioned earlier.

19 Q. What do you believe your qualifications
20 are to opine about whether the defendants entered
21 into a conspiracy?

22 A. I would say that, having reviewed the
23 evidence, including the way in which people, not
24 people, but -- well, people, yes -- the way in which
25 the defendants came to not just establish kind of

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1 independent agreements between companies, but that
2 these agreements resembled each other, they grew out
3 of previous agreements gave indication that there
4 was -- these were not independent events, but they
5 were part of something larger that was happening.

6 Q. And what is it about your experience that
7 peculiarly qualifies you to look at that experience
8 and opine about whether there is a conspiracy?

9 A. Well, I think one thing that's unique
10 about my experience is that I have done -- I am an
11 academic, but before doing that I also worked in
12 high tech companies as a software engineer, as a
13 user interface designer, in Boston, but also here in
14 Silicon Valley.

15 And so by studying -- that work industry
16 experience coupled with my academic work on
17 non-competes, I think I have a unique perspective on
18 how these agreements might be used across companies
19 for suppressing mobility or compensation.

20 Q. In your work as a high tech engineer what
21 was your experience with conspiracies among
22 companies to suppress competition?

23 A. I did not see any conspiracies as an
24 engineer and user interface designer.

25 Q. Did you evaluate in that capacity whether

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1 there were conspiracies among others?

2 A. I did not.

3 Q. And in your work on non-competes -- as I
4 understand your work on non-competes -- correct me
5 if I am wrong, but your work on non-competes relates
6 to agreements between employers and individual
7 employees; is that correct?

8 A. That would be correct.

9 Q. Did any of your published materials
10 address the existence or non-existence of
11 conspiracies among employers?

12 A. No, I don't think so.

13 Q. Other than what you have just testified
14 to, is there anything else at all that you believe
15 qualifies you as an expert with respect to whether
16 the defendants entered into a conspiracy?

17 A. I think it's summarized in my previous
18 statements.

19 Q. Did you at any time suggest to anyone that
20 you did not feel qualified to opine about whether a
21 conspiracy existed?

22 MR. HARVEY: I just caution the witness
23 not to disclose the content of attorney
24 communications.

25 THE WITNESS: So you are asking -- if you

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1 are asking if I told -- if I had a discussion
2 regarding that with anyone besides counsel, I
3 haven't discussed the contents of this case with
4 anyone outside of counsel.

5 MR. PHILLIPS: Q. Have you ever told
6 anyone in any context that you felt like you were
7 qualified to opine -- that you were qualified to
8 opine about the existence of a conspiracy among high
9 tech companies?

10 A. No one has ever asked me that question, so
11 I haven't had a reason to answer it.

12 Q. So you have never said that?

13 A. I have not said that.

14 Q. Ever told anybody you didn't feel
15 qualified to do that?

16 A. I did not say that.

17 Q. Do you think you are qualified to do that,
18 sir?

19 A. I think that my experience combining -- I
20 think I have answered this question. But to
21 restate, I think that my experience working in
22 Silicon Valley and my academic experience is unusual
23 and gives me a perspective that others would not
24 have.

25 Q. Do you think the jurors in this case might

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1 illegal?

2 MR. HARVEY: Objection as to form.

3 THE WITNESS: As I said, I'm not a lawyer,
4 and I don't think my charge was to determine whether
5 actions were illegal or not.

6 MR. PHILLIPS: Q. Then why did you
7 express --

8 MR. HARVEY: Objection. Please finish
9 your answer.

10 THE WITNESS: I am still trying to finish
11 the answer. Thank you.

12 What I have been asked to do is to
13 evaluate the degree to which those collaborations
14 were reasonably necessary for these --

15 Sorry. I misspoke.

16 -- the degree to which the
17 anti-solicitation agreements were necessary for the
18 success of the technical collaborations, for which I
19 have relied on materials including the Department of
20 Justice consent decree. But I wouldn't -- but I'm
21 not a lawyer, as I said before.

22 MR. PHILLIPS: Q. Why did you express the
23 opinion in your report that the defendants' conduct
24 was illegal?

25 MR. HARVEY: Objection as to form.

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1 MR. HARVEY: Objection as to form.

2 THE WITNESS: Okay. So, if we start on
3 page 12, I provide a few examples of these.

4 So, for example, at -- so I will start
5 with 24B. Excuse me. Actually, 24A.

6 So Google said that it claims that these
7 policies -- Google claims that it perceived that
8 engaging in cold calling of these companies'
9 employees could jeopardize important collaborative
10 and business relationships between Google and these
11 companies.

12 In section B Adobe claimed that the
13 non-solicitation --

14 MR. PHILLIPS: Q. I am sorry. Maybe we
15 could do one at a time, because I have a follow-up
16 question. I am happy to let you do the others as
17 well.

18 Do you agree or disagree with the notion
19 that engaging in cold calling could jeopardize
20 collaborative business relationships between
21 companies?

22 A. I could see how it might make those
23 collaboration partners uneasy. But the -- my charge
24 was not to determine whether they would make
25 partners uneasy. It was whether they were

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1 reasonably necessary for the collaboration to work.

2 Q. And when you say uneasy, what do you mean
3 by that?

4 A. That they might be unhappy.

5 Q. Might they be more reluctant to put their
6 best employees into the collaboration?

7 MR. HARVEY: Objection as to form.

8 THE WITNESS: If you are asking me to
9 speculate as to what measures they might have taken,
10 they could have taken several measures. They could
11 have chosen to raise compensation for the employees
12 who would be in collaborations so that they would be
13 less likely to be lured away. They could do things
14 to make it more attractive to stay at that company.

15 MR. PHILLIPS: Q. How about not putting
16 their best employees in the collaboration? Is that
17 another possibility?

18 MR. HARVEY: Objection as to form.

19 THE WITNESS: It's a possibility.

20 MR. PHILLIPS: Q. How about not engaging
21 in future collaborations with the other company?

22 A. That's a possibility. But the record
23 shows that the companies engaged in several
24 collaborations without anti-solicitation agreements.
25 And so I don't see that as something the defendants

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1 have actually done.

2 Q. Feel free to go on. Do you want to talk
3 about B?

4 A. So I am actually going to go to --

5 Q. What's the next one?

6 A. -- C.

7 Q. Let me just ask -- restate the question.

8 What's the next one you would identify as
9 indicating that the defendants claimed that the
10 non-solicitation agreements were essential to their
11 collaboration?

12 MR. MITTELSTAEDT: The next one after 24A?

13 MR. PHILLIPS: Yeah, the next one after
14 24A. Sorry.

15 THE WITNESS: So I would go to B, where
16 Adobe claimed that the non-solicitation policy
17 between Adobe and Apple fostered a close working
18 relationship over the last 30 years, including over
19 200 cooperative agreements.

20 MR. PHILLIPS: Q. You read that to say
21 that Adobe and Apple would not have engaged in any
22 such relationship but for the anti-solicitation
23 agreements? Is that how you interpret that
24 statement?

25 A. Well, certainly in its interrogatory

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1 response Adobe makes that representation. And they
2 state that the non-solicitation agreements were
3 essential to their collaboration.

4 Q. Where in the interrogatory response is
5 that?

6 A. Oh, I don't have the response in front of
7 me. This is a representative of things that they
8 said.

9 Q. Are you aware of any statement in the
10 interrogatory responses other than this statement in
11 which Adobe asserted that it would not have
12 collaborated with Apple if not for the
13 anti-solicitation agreement?

14 A. I could best answer that question if I
15 could look at the interrogatory response, if you
16 have it handy.

17 Q. Sitting here now, do you recall any such
18 statement?

19 A. I have read thousands of pages in
20 preparation for this, and I can't remember
21 specifically that statement.

22 Q. But you --

23 A. But I would be happy to review that.

24 Q. But you agree with me that the statement
25 in 24B doesn't say that the anti-solicitation

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1 agreement was essential to any collaboration between
2 Adobe and Apple, do you not?

3 MR. HARVEY: Objection as to form.

4 THE WITNESS: Sorry. I missed the last
5 part of that.

6 MR. PHILLIPS: Q. 24B -- in 24B that
7 doesn't say that the anti-solicitation agreement was
8 essential to any collaboration between Adobe and
9 Apple; correct?

10 MR. HARVEY: Same objection.

11 THE WITNESS: I'm not sure that's correct.

12 MR. PHILLIPS: Q. You interpret the
13 word --

14 A. May I finish my answer, please?

15 I am not sure that's correct. The close
16 working relationship they describe here, that they
17 describe in the interrogatory response, where they
18 say that at one point Adobe -- sorry -- Apple was
19 responsible for virtually all of Adobe's revenue,
20 that -- achieving that without a close working
21 relationship would be a logical conclusion that they
22 would view that as very necessary. So that was my
23 understanding from the interrogatory report.

24 Q. Any other -- other than 24A and 24B, any
25 other statement by the defendants that indicates

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1 that the anti-solicitation agreements were essential
2 to their technical collaborations?

3 A. Okay. So if we look at C, Intuit states
4 that if one or the other company using the
5 collaboration has an opportunity to identify the
6 other company's best employees for the purpose of
7 recruiting them, it will create a lack of trust and
8 a disincentive to assign the best employees for them
9 to be as open with each other.

10 Q. Do you agree or disagree with the notion
11 expressed there?

12 A. I don't disagree with their opinion
13 regarding their technical collaboration, why they
14 might be worried about that. And I think that's why
15 the Department of Justice allows for technical
16 collaborations -- sorry. I misspoke.

17 That's why the Department of Justice in
18 its consent decree allows for anti-solicitation
19 agreements that are attached to specific
20 collaborations, time bound, naming the people
21 involved on both sides.

22 Q. Where in 24C does it indicate that Intuit
23 thought that the anti-solicitation agreement was
24 necessary in order for it to collaborate at all with
25 Google?

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1 MR. HARVEY: Objection as to form.

2 THE WITNESS: I will read the statement
3 again. Intuit says that it will create a lack of
4 trust and a disincentive to assign the best
5 employees, for them to be as open with each other.

6 MR. PHILLIPS: Q. Doesn't the statement
7 that it might create a disincentive to assign the
8 best employees necessarily imply that they would in
9 fact still collaborate, just not assigning their
10 best employees?

11 MR. HARVEY: Objection as to form.

12 THE WITNESS: It doesn't necessarily
13 entail that.

14 MR. PHILLIPS: Q. What's next after 24C?

15 A. It could also mean that they would
16 increase the compensation of those key employees.
17 It could also mean, as it did mean in the original
18 engagement between Intuit and Google, that they
19 would name the employees they were worried about and
20 craft a specific agreement, as Google and Intel --
21 sorry, not Intel -- Google and Intuit did
22 originally, where I believe Shona Brown said, "I am
23 okay with agreeing not to recruit these 18 employees
24 from Intuit for the period of the collaboration or
25 12 months after the negotiations break down."

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1 MR. PHILLIPS: Q. What's the next one
2 where you think that they stated that the
3 anti-solicitation agreement was necessary in order
4 for them to collaborate at all?

5 A. That would be D. There Apple says that it
6 wanted competitors to refrain from actively
7 recruiting each other's employees, to assure Apple's
8 partners that "Apple will not use the knowledge it
9 gains through its collaboration to 'cherry pick' its
10 partners' employees, because such solicitations are
11 disruptive to the relationships."

12 Q. Do you agree or disagree with the notion
13 that cherry picking each other's employees would be
14 likely disruptive to collaborative relationships?

15 A. It could be disruptive. I think that's --
16 that's a -- that's a possible fear that Apple would
17 have. And losing any employee could be disruptive,
18 whether it's to a collaboration partner or just more
19 generally.

20 Q. And what's the next one that you think
21 indicates that the defendants thought that the
22 anti-solicitation agreements were necessary in order
23 for them to collaborate at all?

24 A. So in E Lucasfilm says that if the
25 companies were to actively raid one another's best

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1 employees during those collaborations, it would
2 destabilize production teams.

3 Q. Which language in there indicates to you
4 that, absent an anti-solicitation agreement, Pixar
5 and Lucasfilm would not collaborate at all?

6 A. Well, if they are concerned about
7 production teams being destabilized, they might be
8 worried about being able to deliver the -- to
9 achieve the deliverables on time. Part of the
10 interrogatory responses from Lucasfilm are very
11 sensitive to time frames.

12 Q. And do you -- sorry.

13 A. That's all I had to say.

14 Q. Do you agree or disagree with the notion
15 that actively raiding one another's best employees
16 during a collaboration might destabilize the
17 collaboration team?

18 MR. HARVEY: Objection as to form.

19 THE WITNESS: I think it's a possible
20 concern, and I think that's why the Department of
21 Justice allows for tailored anti-solicitation
22 agreements for specific collaborations.

23 MR. PHILLIPS: Move to strike after "I
24 think it's a possible concern" as non-responsive.

25 MR. HARVEY: Objection.

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1 MR. PHILLIPS: Q. Sir, have you ever
2 spoken to anyone at the Department of Justice about
3 the consent decree or anything else?

4 A. I have not. I have read the -- I have
5 read the document.

6 Q. Anything else -- anything else that you
7 believe indicates that the defendants thought that
8 the anti-solicitation agreements were necessary in
9 order for them to collaborate?

10 A. Okay. In -- continuing on, in F, Pixar
11 said that its anti-solicitation agreement with
12 Lucasfilm avoided cold calling activity that could
13 be harmful to that close relationship and disruptive
14 to those beneficial collaborations, and further goes
15 on to say that the relationship with Apple was
16 assisted by the fact that the companies did not
17 engage in cold calling activity that could be
18 harmful to that close relationship and disruptive to
19 those beneficial collaborations.

20 Q. And do you agree or disagree with the
21 notion that cold calling activity could be harmful
22 to a collaborative relationship and disruptive of
23 it?

24 A. I think it's possible that it could be
25 disruptive. That's why they are worried about that.

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1 Q. Any other indications the defendants
2 thought that the anti-solicitation agreements were
3 necessary in order for them to collaborate at all?

4 A. So the last item is in G, where Intel
5 defended its anti-solicitation agreement because
6 if -- if another -- if a collaborator --

7 Excuse me.

8 Because having a collaborator hire its --
9 not hire. Sorry. But having a collaborator cold
10 call and target its employees would be seen as
11 significantly undermining trust, causing significant
12 ill will, and having significant negative
13 repercussions on the collaboration, which would be
14 indicative that they were -- that they might
15 consider not having the collaboration without it.

16 Q. That they might consider not having the
17 collaboration, but that they also might consider
18 still having the collaboration; correct?

19 A. They could still consider it.

20 Q. Do you agree or disagree with the
21 statement there that cold calling by a collaborator
22 might significantly undermine trust, cause ill will,
23 have negative repercussions on a collaboration?

24 A. I think my answer to that would be similar
25 to my answer to your questions on the previous

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1 statements, that it is possible that that could be
2 the case. And for that reason, it was surprising to
3 me that the defendants entered into technical
4 collaborations where no anti-solicitation agreement
5 was included.

6 MR. PHILLIPS: Move to strike, starting
7 with "and for that reason" as non-responsive.

8 MR. HARVEY: Objection.

9 MR. PHILLIPS: Q. In paragraph 25 at the
10 top of page 14 you say that "Defendants argue that
11 the Anti-Solicitation agreements are essential for a
12 successful technical collaboration."

13 And you then say, "If one takes this
14 argument at face value, then a rational company
15 should adopt Anti-Solicitation agreements if and
16 only if undertaking a technical collaboration with
17 another firm," and that this implies two actions,
18 that "Every Anti-Solicitation agreement between two
19 companies should be tied to a corresponding
20 technical collaboration," and that "Every technical
21 collaboration should have an Anti-Solicitation
22 agreement in place between the two companies."

23 Do you see that?

24 A. I do.

25 Q. Is that your opinion?

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1 A. It is.

2 Q. That opinion depends upon the premise that
3 an anti-solicitation agreement is necessary to any
4 technical collaboration; correct?

5 A. It depends on the assumption that the
6 defendants believe that, yes.

7 Q. And that there would not be any technical
8 collaboration in the absence of an anti-solicitation
9 agreement; correct? That's the premise of this.

10 MR. HARVEY: Objection as to form.

11 THE WITNESS: That there -- yes.

12 Sorry. May I clarify the answer?

13 Yes, assuming, though I didn't write this,
14 that the companies wanted that technical
15 collaboration to be successful, which I would
16 assume. Otherwise they would not take the time to
17 establish the technical collaboration.

18 Q. To be successful, or to be as successful
19 as it possibly could be?

20 A. I'm not sure I can distinguish between
21 that.

22 Q. We talked before about degrees of success,
23 and I think you agreed with me that there could be
24 degrees of success in a collaboration.

25 And my question now is, do you think --

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1 can generate benefits for consumers by improving the
2 success of that venture, by making it more
3 successful, even if the collaboration would have
4 occurred in the absence of the anti-solicitation
5 agreement; correct?

6 MR. HARVEY: Objection as to form.

7 THE WITNESS: I am sorry. Can you ask one
8 more time?

9 MR. PHILLIPS: Q. An anti-solicitation
10 agreement can, by generating -- by making a
11 collaboration more successful than it otherwise
12 would have been, can generate benefits for consumers
13 even if that collaboration would have occurred in
14 another form without the anti-solicitation
15 agreement; correct?

16 MR. HARVEY: Same objection.

17 THE WITNESS: Yeah, I would agree with
18 that.

19 MR. PHILLIPS: Q. Going back to page two
20 of your report --

21 I am sorry. One other question along this
22 line.

23 If in the course of a collaboration one of
24 the companies cold called and stole away key
25 employees of the other company, do you think that

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1 firms for the most part use them for all the
2 technical employees. And that's my personal
3 experience as well, working at startup companies in
4 Boston, as well as -- where I believe everyone used
5 a non-compete. But I don't have definitive data on
6 that point, so --

7 Q. Are you aware of any --

8 A. -- there could be variations. Sorry.

9 Q. Are you aware of any evidence that
10 non-compete agreements will result in company-wide
11 suppression of compensation?

12 A. The closest thing to that would be -- the
13 closest evidence of what you ask would be in the
14 work of Dr. Garmaise --

15 Did his paper disappear? No, it's here.

16 -- the work of Dr. Garmaise, who connects
17 the -- connects state level changes in non-compete
18 enforcement to compensation.

19 Now, his data is for executives of those
20 firms, and he uses -- so it's not for the entire
21 company. So he has not concluded that.

22 However, his results on mobility of
23 executives mirror my own results on the mobility of
24 technical employees. And so, although I don't have
25 direct evidence, I would think that the same

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1 findings on compensation would hold for technical
2 employees as well.

3 MR. MITTELSTAEDT: Could I just ask
4 what -- I didn't hear the last thing you said.

5 MR. PHILLIPS: He said, "And so, although
6 I don't have direct evidence, I would think that the
7 same findings on compensation would hold for
8 technical employees as well."

9 Q. So you are saying that you think that the
10 same findings as Professor Garmaise found for
11 executives would hold for technical employees? Is
12 that what you are saying?

13 A. That's my expectation, yes.

14 Q. And do you know whether such analysis has
15 ever been done?

16 A. Not to my knowledge. I think such
17 analysis would require compensation data for all
18 employees of a firm, of a company. My
19 understanding, that the only place that data is
20 available for the United States is from the US
21 Census Bureau's employee-employer matched data set.
22 I am not aware of anyone who has analyzed the data
23 to that end, and I think it would be difficult to
24 achieve, given some of the rules that the Census
25 Bureau has.

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1 change jobs.

2 MR. PHILLIPS: Q. But the reason why
3 anti- -- non-compete agreements reduce individuals'
4 compensation, to the extent that they do, is because
5 they need to work in a different industry when they
6 leave their employer; correct?

7 A. No, that's not the only reason. It is the
8 threat of having to leave the industry or work for a
9 non-competitor that may lead them to not explore the
10 labor market and to stay where they are. And
11 because there is no threat of them leaving, the
12 company then doesn't have to pay them as much as
13 they might have to if they were able to consider
14 outside opportunities that were attractive.

15 Q. Outside opportunities in the same
16 industry?

17 A. Right.

18 Q. So it's the threat of not being able to
19 work in that industry that results in them receiving
20 lower compensation; correct?

21 MR. HARVEY: Objection as to form.

22 THE WITNESS: I would say it's the
23 elimination of the threat that they might leave for
24 an attractive opportunity that enables the current
25 employer to maintain or not raise compensation.

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1 MR. PHILLIPS: Q. The elimination of the
2 threat that they might leave for an opportunity in
3 the same industry; correct?

4 A. I think that's what I said.

5 Q. And so you agree with that; the answer to
6 my question is yes?

7 MR. HARVEY: Objection.

8 THE WITNESS: Well, let me back up here.
9 Are we talking about --

10 MR. PHILLIPS: Q. Let me restate the
11 question.

12 A. Are we talking about anti-solicitation
13 agreements?

14 Q. We are talking about non-compete
15 agreements. The compensation, in your view, may be
16 suppressed for individuals because they -- because
17 there is not a threat that they will leave their
18 employer to work for another employer in the same
19 industry.

20 A. So that is -- yes, that is a principal
21 reason. But it's not the only reason that
22 Garmaise advances in his paper. He says also that
23 knowing that they do not have mobility, employees
24 may be inclined not to invest in their own skills.
25 They may become, for lack of a better word -- they

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1 may become complacent. They may not improve their
2 performance, and thus the company may choose not to
3 compensate them as well as they might have.

4 Q. And am I correct that it's your view that,
5 notwithstanding these effects on employee mobility
6 and compensation, that it is unresolved whether the
7 benefits to firms of non-compete agreements outweigh
8 any costs to their employees of those agreements?

9 MR. HARVEY: Objection as to form.

10 THE WITNESS: Do you want to try that
11 again?

12 MR. PHILLIPS: Q. Am I correct that it is
13 your view that, notwithstanding these effects on
14 employee mobility and compensation, that it is
15 unresolved whether the benefits to firms of having
16 non-compete agreements outweigh the costs to their
17 employees from those agreements?

18 MR. HARVEY: Same objection.

19 THE WITNESS: Yes, I would agree with
20 that. I don't think anyone --

21 MR. PHILLIPS: Q. And for that reason --

22 MR. HARVEY: Sorry. You were saying
23 something.

24 MR. PHILLIPS: Q. For that reason --

25 MR. HARVEY: Sorry. He was saying

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1 with the terms of the Justice Department consent
2 decree?

3 MR. HARVEY: Objection as to form. Sorry.

4 THE WITNESS: There were two items I
5 considered. The first one was whether the companies
6 applied the anti-solicitation agreements
7 consistently in support of important technical
8 collaborations, and also whether they were
9 consistent with the Department of Justice
10 stipulations. So that was one of the things I
11 looked at, but that was not the only thing.

12 MR. PHILLIPS: Q. The two things you
13 looked at were whether the anti-solicitation
14 agreements were consistently used in support of
15 technical collaborations. That was one test you
16 used. And the second test was whether they were
17 consistent with the DOJ consent decree. Correct?

18 A. That's what I describe in here.

19 Q. And what is your particular expertise with
20 respect to deciding whether those agreements
21 conformed to the Department of Justice consent
22 decree?

23 MR. HARVEY: Objection as to form.

24 THE WITNESS: As I have said several times
25 today, I am not a lawyer, and I am not a lawyer who

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1 CERTIFICATE OF REPORTER

2 I, SARAH LUCIA BRANN, a Certified
3 Shorthand Reporter, hereby certify that the witness
4 in the foregoing deposition was by me duly sworn to
5 tell the truth, the whole truth, and nothing but the
6 truth in the within-entitled cause;

7 That said deposition was taken in
8 shorthand by me, a disinterested person, at the time
9 and place therein stated, and that the testimony of
10 the said witness was thereafter reduced to
11 typewriting, by computer, under my direction and
12 supervision;

13 That before completion of the deposition,
14 review of the transcript [X] was [] was not
15 requested. If requested, any changes made by the
16 deponent (and provided to the reporter) during the
17 period allowed are appended hereto.

18 I further certify that I am not of counsel
19 or attorney for either or any of the parties to the
20 said deposition, nor in any way interested in the
21 event of this cause, and that I am not related to
22 any of the parties thereto.

23 DATED: November 20, 2013

24

25 _____
SARAH LUCIA BRANN, CSR No. 3887

Exhibit C

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE: HIGH-TECH EMPLOYEES
ANTITRUST LITIGATION

No. 11-CV-2509-LHK

THIS DOCUMENT RELATES TO:

ALL ACTIONS

REBUTTAL REPORT OF MATTHEW MARX

December 11, 2013

HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

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I. Introduction, Assignment, and Summary of Conclusions

1. I have been asked to assess the reply reports of Doctors Talley, Murphy, Lewin, and Snyder and also to determine whether these lead me to reconsider my previously expressed views. My assessment is that they do not. Exhibit 1 is my updated curriculum vita and Exhibit 2 lists the documents on which I relied in preparing this report. My findings are summarized as follows:

2. Defendants' experts argue that it would be costly and burdensome for companies to tailor Anti-Solicitation Agreements to individual collaborations, but they provide no evidence that this is true and moreover ignore the success of collaborations involving Defendants following the United States Department of Justice consent decree requiring such tailoring. They mistakenly assume that any employee involved in a collaboration is therefore visible to and subject to cold-calling by the collaborator, which is not realistic and exaggerates the supposed burden of tailoring such agreements.

3. Defendants' experts claim that the presence of an outside Director on a company's Board (or an advisory relationship, as in the case of Bill Campbell and Google) can justify a broad Anti-Solicitation Agreement for the sake of avoiding conflicts of interest, but they fail to identify specific examples of such conflicts at Defendants which led to such agreements. Moreover, according to their theory such Anti-Solicitation Agreements should be quite prevalent though none of the experts could summon a single example aside from the Defendants. Indeed, executives including the Defendants serve on boards successfully without such agreements, including at Defendant boards themselves.

4. Defendants' experts advance the notion that intellectual property protection should justify broad Anti-Solicitation Agreements, but examples they cite from Apple's attempt to threaten Palm as well as merger contracts are not relevant to the Defendants' conduct at issue. Moreover, Defendants' experts ignore that collaboration contracts between Defendants containing explicit confidentiality provisions did not also mention cold-calling.

5. Defendants' experts fail to explain how Defendants carried out important, strategic collaborations in the absence of Anti-Solicitation Agreements both before, during, and after the Class period. They give no evidence that the consent decree has not been adhered to or that it has harmed collaboration. Moreover, they neglect potential industry-wide or regional harm done insofar as Anti-Solicitation Agreements act as a brake on employee mobility.

6. Defendants' experts confuse product markets and labor markets in attempting to claim lack of skills overlap between Defendants' employees. They uncritically accept characterizations of Defendants' workforce composition that are contradicted by the evidence. They mischaracterize cold-calling as playing a minor role and neglect that the Anti-Solicitation Agreements affected the ability to use employee referrals.

7. Defendants' experts distort my research on employee non-compete agreements, mischaracterizing it as limited to the Michigan automotive industry in the 1980s when a reading of my work reveals that I examine data contemporaneous with the Class period and in California and from a variety of industries. They mistakenly assert that evidence that non-compete agreements depress wages is limited to workers who left their jobs and took lower-paying positions in different industries.

II. Arguments that Company-Wide, Indefinite-term Anti-Solicitation Agreements Were Justified by the Nature of the Technical Collaborations Between Defendants is Contrary to the Contemporaneous Evidence and to the Experience of Defendants Before and After the Conspiracy Period

8. Defendants' experts advance a series of arguments justifying the use of secretive Anti-Solicitation Agreements that were not limited with regard to the type of employees affected, geography, or the length of time. Dr. Snyder and Dr. Talley, for instance, argue that it would have been difficult ex ante for Google and Intel to have identified precisely the individuals to be involved in these collaborations. But they give no evidence showing that it is indeed burdensome to identify individuals involved in a collaboration and ignore that Google's own Do Not Call List

contains the names of individuals from Intuit.¹ Moreover, in support of this contention, Dr. Snyder uncritically accepts Defendants' estimates regarding the number of employees whose work touched on collaboration with other companies, such as "more than 1,000 Intel employees worked on Google Chrome related projects."² However, I seriously doubt that all of these 1,000+ Intel employees were visible to Google and thus at risk of being cold-called by them. In my own experience managing technical collaborations, it is standard practice for a small number of people to interface with the collaboration partner while a larger number of people work "behind the scenes." Defendants' experts provide no evidence to the contrary. Thus Dr. Snyder and Defendants' other experts exaggerate the difficulty of tracking workers or groups of workers involved in a collaboration.

9. The foregoing also reinforces the argument that increasing the compensation of workers who become visible to another company in the course of a collaboration is a viable alternative, particularly given the extensive benefits of the collaborations claimed by the Defendants in their interrogatory responses.

10. Moreover, Defendants agreed to use Anti-Solicitation Agreements in accordance with the Department of Justice consent decree and have continued to collaborate since that time as Apple CEO Tim Cook testified. If it has been "unduly burdensome",³ as Dr. Snyder claims, to comply with the terms of the consent decree, such is not evident in the strong financial performance of the Defendants, as I noted in my original report.

11. Moreover, as Dr. Snyder himself notes, Defendants continue to collaborate in the post-Class period.⁴ Among the collaborations he cites as yielding "new and innovative products"⁵ is the Intel/Google collaboration on Android. While Dr. Snyder's report mentions a start date of 2007 for the collaboration and implies that this led to 80% market share for Android,

¹ GOOG-HIGH-TECH-00008283.

² Snyder expert report, Exhibit 5.

³ Snyder expert report, ¶ 25.

⁴ Snyder expert report, Exhibit 5.

⁵ Snyder report, ¶ 65.

the September 2011 Huffington Post article cited clarifies that work had yet to commence: “The two companies will work together to optimize future versions of Google’s Android mobile software for Intel’s ‘Atom’ processor”, with the aim of shipping an Intel-powered Android phone “in the first half of 2012.”⁶ Hence, to whatever extent the Intel/Google collaboration contributed to Android’s smartphone dominance, those benefits were realized from collaborations after both companies had agreed to the DOJ consent decree.

12. Defendants’ experts also ignore contrary evidence regarding the motivations of the CEOs in entering into the agreements. For example, Dr. Talley ignores the Anti-Solicitation Agreements of Pixar with Lucasfilm and Apple as well as the corresponding admission of desire to suppress employee compensation by George Lucas and Ed Catmull. He also ignores Catmull’s testimony that Pixar owner Steve Jobs was aware of why Pixar was using Anti-Solicitation Agreements.⁷ He does not review the threats used by Steve Jobs to get Adobe, Palm, and Google to agree to Anti-Solicitation Agreements. Moreover, he ignores Google’s attempt, facilitated by Intuit Chairman Bill Campbell, to convince Facebook to enter an Anti-Solicitation Agreement in the absence of either a collaboration or a shared board member.

13. In their interrogatory responses, Defendants argued that their Anti-Solicitation Agreements were necessary to collaborations among them (emphasis mine):

a. Intel wrote that “active solicitation of a business partner’s employees tends to deprive the collaboration of key talent on which it depends and undermine the trust between the parties **necessary** to the collaboration’s success, thereby weakening or even **threatening the viability** of existing collaborations.”⁸

⁶ Snyder expert report, p. 32 ¶ 66.

⁷ “Well, I would have let Steve know what we were doing. I mean, so he knew that. I don’t remember any particular conversation. But he knew and understood the – what we were trying to do with the Northern California community.” Deposition of Ed Catmull, 61:15-19.

⁸ Intel’s Objections and Amended and Supplemented Responses to Plaintiffs’ Second set of Interrogatories 19:8-11.

b. Adobe wrote of its collaboration with Apple that “This partnership and extensive series of collaborations **required** mutual trust. The companies [sic] collaborative efforts...would have been undermined if they felt the need to constantly shield their employees.”⁹

c. Apple wrote that “its **decisions to refrain from cold calling companies of Adobe, Intel, Google, and Pixar were reasonably necessary** for the success of Apple’s relationships with each company”¹⁰ and that “Apple’s **decisions not to cold call employees of these key partners were vital** to Apple’s successful collaborations.”¹¹

14. Given these representations, Defendants’ experts do not adequately explain how Defendants have successfully executed technical collaborations without Anti-Solicitation Agreements—before, during, and after the Class period. As I described in my initial report, then-Adobe CEO John Warnock could not recall an Anti-Solicitation Agreement with Apple; his recollection is corroborated by the deposition testimony of Danielle Lambert, who testified that the Adobe/Apple Anti-Solicitation Agreement commenced no earlier than 2005.¹² If the Anti-Solicitation Agreement was so important, it is puzzling that these companies collaborated so successfully without one for two decades.

15. Moreover, as is evident from Intel CEO Paul Otellini’s deposition testimony,¹³ Intel and Microsoft conducted an enormously strategic and successful collaboration over the course of many years and without an Anti-Solicitation Agreement. Given that Defendants argue

⁹ Defendant Adobe Systems Incorporated’s Amended Answer to Plaintiff’s Consolidated Amended Complaint 24:9-19.

¹⁰ Defendant Apple Inc.’s Amended Responses to Plaintiffs’ Second Set of Interrogatories 12:27-28.

¹¹ Defendant Apple Inc.’s Amended Responses to Plaintiffs’ Second Set of Interrogatories 11:25-26.

¹² Deposition of Danielle Lambert, 192:25-193:8.

¹³ “Q. On what subjects or products has Intel communicated with—collaborated with Microsoft? A. Virtually everything we do and everything they do. I mean the—you know, most of our chips run Microsoft software somewhere along the way.

Q. Did you ever approach Microsoft about an agreement or an understanding with them not to solicit each other’s employees?

A. No.” Deposition of Paul Otellini, 97:25-98:8.

that Anti-Solicitation Agreements were important to preserving the trust essential to these collaborations, I disagree with Dr. Snyder that it is “not relevant” that Intel’s perhaps longest-standing collaboration was not governed by an Anti-Solicitation Agreement.¹⁴ Moreover, Apple did not have a company-wide Anti-Solicitation Agreement with Microsoft but rather appeared to avoid recruiting from only the Mac and Exchange divisions.¹⁵

16. Further to this point, whereas other of the Defendants’ experts emphasize that not having an Anti-Solicitation Agreement in place would make it difficult to put the best people on the collaboration for fear of them being poached, Dr. Talley argues that some technical collaborations bear little risk of poaching, for instance, “information exchange” and “high-level standard setting accords.”¹⁶ But even in those settings, information would need to be exchanged by people who would be visible to the collaborator. Perhaps Dr. Talley is arguing that Anti-Solicitation Agreements are only needed in important collaborations (“anticipated depth and volume of cooperation”, “extent to which information is shared”¹⁷); if so, such reasoning would not explain why Intel would not use an Anti-Solicitation Agreement with Microsoft, with which it had one of its deepest and most extensive collaborations.

17. Finally, Dr. Talley did not examine the post-Class conspiracy period¹⁸ or review the DOJ consent decree.¹⁹ Dr. Talley conceded in his deposition that there was no evidence to suggest that Defendants have violated the consent decree;²⁰ and he acknowledged that collaborations among Defendants continued after they agreed to the consent decree.²¹ Dr. Talley provided no examples of any technical collaborations that were prevented or weakened as a result of the consent decree. Dr. Talley conceded that the consent decree did not result in Paul

¹⁴ Snyder report, ¶ 64.

¹⁵ Exhibit 265.

¹⁶ Talley report, p. 25 ¶ 68.

¹⁷ Talley report, ¶ 68.

¹⁸ Talley deposition, 133:16-19.

¹⁹ Talley deposition, 270:8-10; 275:6-10.

²⁰ Talley deposition, 272:12-17.

²¹ Talley deposition 267:24-277:4.

Otellini leaving Google's Board²² or Bill Campbell ceasing to provide advice to Google's executives.²³

18. More generally, in arguing for the procompetitive impact of the collaborations Defendants' experts do not consider industry- or regional-level implications of discouraging mobility via indefinite-time, company-wide Anti-Solicitation agreements. Several scholars have argued that interorganizational mobility "permits the rapid diffusion of information, leading to industry-wide technological gains that arguably swamp the investment disincentives that weak entitlements may engender."²⁴ Professor Garmaise makes a similar point regarding non-compete agreements: enforceable noncompetition contracts may yield benefits to individual firms but may also generate offsetting negative externalities by restricting labor mobility.²⁵ This sentiment is backed up by Professor Alan Hyde's work on high-velocity labor markets;²⁶ by Professor AnnaLee Saxenian's claim that a key reason that Silicon Valley outpaced Boston's Route 128 technical corridor was the rapid movement of personnel from one company to another²⁷; by Professor Almeida and Professor Kogut's observation that the rapid diffusion of knowledge in the northern California / Silicon Valley is coincident with high levels of inventor mobility²⁸; and by Professor Breschi and Professor Lissoni's finding that biopharmaceutical spillovers are largely attributable to mobile inventors²⁹. To my knowledge, Defendants' experts have not

²² Talley deposition 176:16-22.

²³ Talley deposition 177:14-24.

²⁴ Lester, G. and E. Ryan, 2010. "Choice of Law and Employee Restrictive Covenants: an American Perspective." *Comparative Labor Law & Policy Journal* 31(2):392.

²⁵ Garmaise, Mark. "The Ties that Truly Bind: Noncompetition Agreements, Executive Compensation, and Firm Investment." *The Journal of Law, Economics, and Organization*. 27(2):376-425.

²⁶ Hyde, 2003. *Working in Silicon Valley: Economic and Legal Analysis of a High-Velocity Labor Market*. M.E. Sharpe.

²⁷ Saxenian, A. 1996 *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press.

²⁸ Almeida, P., and B. Kogut, 1999. "Localization of Knowledge and the Mobility of Engineers in Regional Networks." *Management Science* 45(7):905.

²⁹ Breschi, Stefano and Francesco Lissoni, "Mobility of skilled workers and co-invention networks: an anatomy of localized knowledge flows." *Journal of Economic Geography* 9(4):439-468.

assessed the potential of Anti-Solicitation Agreements to attenuate positive externalities such as knowledge diffusion and broader technological gains. Instead, they focus on the interests of Defendants in discouraging employee mobility.

III. Defendants' Experts Argue Unconvincingly that "Maintaining Good Board Relations" Explains Defendants' Anti-Solicitation Agreements

19. Dr. Talley claims that I "paint[] an overly broad and simplistic picture of the overlapping executive relationships between the Defendants...ignoring the evidence of [their] potential procompetitive purpose."³⁰ Nowhere in my report do I say that directorships (including overlapping directorships) have no positive purpose; nor do I state that "interrelatedness between corporate entities is anomalous."³¹ My point regarding the relationships between Defendants in the original report is that the existence of these governance and advisory relationships help to explain the spread of rare, secretive agreements among a small number of co-located high-tech companies. Indeed, Dr. Talley was unable to identify any instance of an indefinite-term, company-wide Anti-Solicitation Agreement aside from those at issue in this case; nor could he recall having advised any company to adopt such an agreement.

20. Dr. Murphy argues that "maintaining good Board relations"³² is a justification for an Anti-Solicitation Agreement. He is joined in this line of reasoning by Dr. Talley, who claims that Anti-Solicitation Agreements "can be a mechanism to address conflicts of interest that may arise in this type of environment."³³ But Dr. Talley offers no evidence that any specific conflicts of interest drove the adoption of Anti-Solicitation Agreements between any Defendants. In the case of Bill Campbell asking for an Anti-Solicitation Agreement between Intuit and Google, one might imagine that his position as Chairman of Intuit, lead Director of Apple, and advisor to companies including Google might have introduced conflicts of interest of the sort Dr. Talley

³⁰ Talley Expert report, ¶ 75.

³¹ Talley Expert report, ¶ 13.

³² Murphy expert report, ¶ 37.

³³ Talley expert report, ¶ 23.

alleges could justify an Anti-Solicitation Agreement. But Shona Brown, Google VP People and member of the Executive Management Group (EMG) testified “I don’t recall any conversations on the topic of conflict of interest and Bill Campbell...I’m not aware of any specific steps that we took to identify conflicts of interest.”³⁴ She could also not recall any EMG meeting Campbell attended where he was asked to leave so that the EMG could have a discussion without him present.³⁵ Given this, there is no basis to assert that the Google/Intuit Anti-Solicitation Agreement was driven by potential conflicts of interest.

21. Moreover, Eric Schmidt was not yet serving on Apple’s Board at the time that the Apple/Google Anti-Solicitation Agreement was established, so Board relations could not have been a justification. Apple and Adobe do not share board members, so no such justification applies there either. Nor did Palm and Apple share a board member at the time of Steve Jobs’ threat to Ed Colligan. Google did not have a board member from Facebook (nor a collaboration) at the time it reached out to Facebook in hopes of establishing a “truce” via an Anti-Solicitation Agreement.

22. In addition, it is clear that Board members rendered service in the absence of an Anti-Solicitation Agreement. Paul Otellini continues to serve on the board of Google to this day, but Defendants offer no evidence that his service as a Director has been hampered in any way by the absence of a company-wide Anti-Solicitation Agreement.

23. Even if one were to accept Defendants’ experts’ characterization of maintaining good Board relations as a justification for an Anti-Solicitation agreement, which I do not, the nature of the time-indefinite, secretive, company-wide Anti-Solicitation Agreements is not consistent with the sort of agreement tailored to a Board member’s service.

24. First, Board members typically serve limited (though often renewable) terms, often three years, so the Anti-Solicitation Agreement should have been stipulated to last only for

³⁴ Deposition of Shona Brown 39:16-21.

³⁵ Deposition of Shona Brown 43:4-9.

the duration of the Board member's service. Yet this is not a characteristic of any of the Anti-Solicitation Agreements. For example, Intel is listed on Google's Do Not Cold Call List "Effective March 6, 2005";³⁶ no end date is mentioned.

25. Second, if the purpose were indeed to maintain good Board relations, one might expect the parties to be less secretive regarding the Anti-Solicitation Agreements. In fact, Board members might well want to go on record as having entered into an Anti-Solicitation Agreement for purposes of making it clear to their employer that they intend to avoid conflicts of interest. But the Anti-Solicitation Agreements in this case, as described in my initial report, were entered into quietly and actively concealed from most employees.

26. Third, if Anti-Solicitation Agreements were such an effective means of handling conflicts of interest and maintaining good Board relations, one would certainly expect them to be prevalent. However, this is not the case. Dr. Talley could not at his deposition name any company that had an Anti-Solicitation Agreement similar to those alleged here.³⁷ Neither could Dr. Snyder, in his deposition, name any non-Defendant that had used an indefinite-time, company-wide Anti-Solicitation Agreement.³⁸

27. Further, there are other ways to avoid a conflict of interest than by entering into an Anti-Solicitation Agreement. If the concern was that Board members may have poached employees they learned about in the course of their Board service, then Board members could have pledged not to be involved in any way with the recruiting of employees of a company whose Board they served on. Similarly, if the concern was that the Director may have held back useful information, including introducing Director's fellow employees to the company when they might have been helpful, then the company could have agreed not to cold-call any employees of

³⁶ GOOG-HIGH-TECH-00008283.

³⁷ "Q. Can you identify a single one? A. Not off the top of my head. If you give me some – a chance to think about it, I might – I might bring it up later on in the deposition." The record shows that he did not later volunteer any such examples. Deposition of Eric Talley, 34:4-7.

³⁸ Snyder deposition, 41:21-42:1.

the Director's company introduced to them via the Director. In neither case would it have been necessary to institute a company-wide, time-indefinite Anti-Solicitation Agreement.

28. In further support of the notion that governance can sufficiently motivate the use of an Anti-Solicitation Agreement, Dr. Murphy offers that the Anti-Solicitation Agreement between Apple and Pixar can be explained by the fact that "[Steve] Jobs thus lead [sic] both Pixar and Apple at the same time, and was particularly well-positioned to identify each company's talent,"³⁹ which could have led to a conflict of interest. This argument is difficult to accept, however, given that Jobs' tenure as CEO of both companies began in 1997, roughly a decade before Apple and Pixar entered the Anti-Solicitation Agreement in 2007, as described in my original report. If this potential conflict of interest had loomed large, one would think that the Anti-Solicitation Agreement would have been entered into at the outset of Jobs' tenure as CEO of both companies.

IV. Protection of Intellectual Property Does Not Explain Defendants' Anti-Solicitation Agreements

29. Dr. Murphy offers the episode involving Apple's attempt to establish an Anti-Solicitation Agreement with Palm as an example of "protect[ing] the intellectual property and other confidential information known to its key employees"⁴⁰ and Jonathan Rubenstein in particular, who had left Apple to join Palm. But this example does not justify the use of an Anti-Solicitation Agreement, for two reasons. First, an Anti-Solicitation Agreement would have done nothing to reclaim the confidential information in Rubenstein's head, as he had already left the company. Second, if the supposed justification for the requested Anti-Solicitation Agreement was to protect against the possibility that Rubenstein would take advantage of his "very, very confidential information about all of our employees in our engineering space"⁴¹ in poaching employees from Apple, this should not have been necessary assuming that Apple had an

³⁹ Murphy report, ¶ 59.

⁴⁰ Expert reply report of Murphy, ¶ 64.

⁴¹ Deposition of Danielle Lambert, 287:11-13.

employee-employer non-solicit agreement in place with Rubenstein. If Apple for some reason did not have an employee-employer non-solicit in place, that oversight hardly justifies the use of a firm-wide Anti-Solicitation Agreement to compensate for its absence.

30. Dr. Talley argues that “[p]rominent model confidentiality / non-disclosure agreements include provisions for either the unilateral or bilateral non-solicitation of the negotiating parties’ employees,”⁴² but the Model Merger Agreement for the Acquisition of a Public Company is not relevant as a justification for any of the Anti-Solicitation Agreements because there is no evidence that any of the collaborations involved merger discussions; Defendants’ interrogatory responses do not refer to merger talks or the possibility of such as grounds for the Anti-Solicitation Agreements. Moreover, the document referenced by Dr. Talley states that such non-solicitation clauses in merger-discussion agreements may need to be tailored by making them time-bound and also by “limit[ing] the provision to a specific subset of the target’s employees with such subset being defined by a specific list or category.”⁴³ None of the agreements at issue had such limitations.

31. Moreover, Dr. Talley fails to explain why contracts memorializing Defendants’ collaborations fail to include Anti-Solicitation Agreements. At his deposition, Dr. Talley confirmed that all such contracts he had reviewed contained provisions designed to protect the confidentiality of proprietary information, but that none of the contracts contained provisions to prevent collaborators from cold-calling employees of the counterparty.⁴⁴ If Defendants were concerned enough about intellectual property to include confidentiality provisions in their collaboration contracts, then they had an opportunity to exclude each other contractually from cold-calling if they felt it an important measure to protect proprietary information as Defendants’ experts argue. Importantly, and as is visible in the Apple/Google contract regarding the integration of Google Maps for use on Apple Mobile Devices signed by Phil Schiller and

⁴² Talley report, ¶ 33.

⁴³ Deposition of Eric Talley, 141:5-11.

⁴⁴ Deposition of Eric Talley, 208:7-214:2

Marissa Mayer, provision 13.12 states that it “supersedes and replaces all prior or contemporaneous understandings or agreements, written or oral.”⁴⁵ The agreements also require that any amendments or modifications be made in writing and signed by both parties.⁴⁶ To my understanding, this would exclude the Anti-Solicitation Agreements at issue. Had Steve Jobs and Eric Schmidt intended their company-wide Anti-Solicitation Agreement to flow through to each collaboration contract, they would have included it in the individual contracts or included it by reference. Instead, Defendants’ CEOs entered into their Anti-Solicitation Agreements in secret and hid them from their employees, including the individuals negotiating the very collaborations Defendants’ experts now assert were the reason for the conspiracy at issue.

V. Defendants’ Experts Underrepresent the Importance of Cold-Calling Defendants’ Employees

32. Dr. Talley conflates labor markets and product markets in attempting to use Standard Industrial Classification (SIC) codes to minimize the overlap of technical skills between Defendants, admitting in his deposition that SIC codes are predominantly determined by products sold.⁴⁷ Just because two companies serve customers in different industries does not mean that they do not employ technical workers with similar skills. Dr. Talley tries to defend his point by quoting Intel CEO Paul Otellini’s testimony that Intel did not employ “that many software people”⁴⁸, but company records show that Intel employed 6,848 software engineers during the Class period, more than any other Defendant (see Exhibit 3). The large number of software engineers at Intel has been noted in the popular press, such as Forbes reporter Brian Caulfield writing that “[w]ith the acquisition of security software vendor McAfee last year, Intel became one of the world’s 10 largest software companies.”⁴⁹ Moreover, Caulfield’s article is

⁴⁵ 231APPLE124988, p. 18.

⁴⁶ For example, see 231APPLE124988, p. 18.

⁴⁷ Deposition of Eric Talley, 265:19-266:1.

⁴⁸ Otellini Deposition, 158:6-1.

⁴⁹ <http://www.forbes.com/sites/briancaulfield/2012/05/09/intel-is-the-biggest-software-company-youve-never-heard-of/>.

cited by Andy Thurai, Intel's Chief Architect & CTO for Application Security and Identity Products, in a blog post hosted on the company's website titled "The 'Intel' on Intel is... We do software!"⁵⁰ Intel indeed does employ many software people, and did so during the Class period.

33. Dr. Snyder also attempts to downplay the importance of cold-calling, also referred to as the recruitment of "passive" candidates. But Google's internal communication reveals considerable interest in "passive sourcing", which in a July 2006 Sourcing Diagnostic presentation is characterized as "play[ing] an increasingly larger role in recruiting as we move forward as a company."⁵¹ The "yield", or conversion rate from initial consideration to accepted offer, of passively sourced candidates is cited as particularly high compared to other channels including employee referrals.⁵² The percentage of hires via passive sourcing grew dramatically from the second quarter of 2005 through the first quarter of 2006.⁵³ This presentation corroborates Shona Brown's claim, referenced in my initial report, that Google would seek to "drain" its competitors' talent.⁵⁴

34. In particular, Dr. Snyder notes that "employee referrals, for example, were the most important source of Google hires in the first quarter of 2005."⁵⁵ If so, then Dr. Snyder should be concerned about Google's Anti-Solicitation Agreements given their impact on the ability to use employee referrals to workers at any of the Defendants with which Google had an Anti-Solicitation Agreement. As Google recruiting director Arnon Geshuri explained: "If a Google employee indicates someone from a DNC company is looking, we first need to make sure that the Googler did not source this candidate. If the Googler did reach out and initiate first contact (e.g., at a cocktail party) then we should walk away and not pursue the lead... We need a

⁵⁰ <http://blogs.intel.com/application-security/2012/06/19/the-%e2%80%9cintel%e2%80%9d-on-intel-is-we-do-software/>.

⁵¹ GOOG-HIGH-TECH-00024150, slide 3 "Executive Summary (I)"; see also slide 5 "It Will Be Challenging to Achieve Hiring Targets with Existing Recruiting Channels", where "passive sourcing" is listed as the first of three tactics by which the "hiring gap can be closed".

⁵² GOOG-HIGH-TECH-00024150, slide 11.

⁵³ GOOG-HIGH-TECH-00024150, slide 15.

⁵⁴ Exhibit 1753.

⁵⁵ Snyder report, ¶ 36.

very clear paper trail that we did not proactively pursue this candidate.”⁵⁶ In his deposition testimony, Geshuri confirmed that the above quote concerns the employee referral program.⁵⁷

VI. Dr. Talley Distorts My Research on Employee Non-Compete Agreements

35. Dr. Talley characterizes my work on employee non-compete agreements as “about patents in Michigan in the 1980s” and then claims that the findings are not relevant to 21st century Silicon Valley.⁵⁸ In doing so, he ignores several important aspects of my published work. First, the individuals whose mobility I measure in my 2009 paper which Talley references were tracked not just in the 1980s but “we were able to observe these inventors longitudinally from 1975 to 2006.”⁵⁹ Dr. Talley agreed with this in his deposition.⁶⁰ Second, these individuals were not limited to Michigan but included Alaska, California, Connecticut, Minnesota, Montana, North Dakota, Nevada, Oklahoma, Washington, and West Virginia,⁶¹ as Dr. Talley also conceded.⁶²

36. Third, my study controlled for the automotive industry to which Dr. Talley alleges my analysis was limited. As my paper itself explained, automotive patents account for a very small part (3.4%) of patents in the dataset.⁶³ When challenged on this point in his deposition, Dr. Talley responded by estimating that “one-eleventh” of all patents in my study should be automotive “because there are eleven states.”⁶⁴ Perhaps Dr. Talley is assuming that all patents in Michigan are in the automotive sector, but this is false as well. Although the published paper does not break down the automotive percentages by state in the paper, reviewing the data used

⁵⁶ Exhibit 184.

⁵⁷ Deposition of Arnon Geshuri, 187:12-188:23.

⁵⁸ Talley report, ¶ 88.

⁵⁹ Marx, Matt, Deborah Strumsky, and Lee Fleming. “Mobility, Skills, and the Michigan Non-Compete Experiment.” *Management Science* 55(6):879.

⁶⁰ Talley deposition, 251:24-252:1.

⁶¹ Marx, Matt, Deborah Strumsky, and Lee Fleming. “Mobility, Skills, and the Michigan Non-Compete Experiment.” *Management Science* 55(6):880.

⁶² Talley deposition, 252:2-5.

⁶³ Marx, Matt, Deborah Strumsky, and Lee Fleming. “Mobility, Skills, and the Michigan Non-Compete Experiment.” *Management Science* 55(6):881.

⁶⁴ Deposition of Eric Talley. 253:7-8.

for that paper shows that only one-ninth (11.2%) of Michigan patents were in the automotive sector. Moreover, as is visible in Table 4 of that paper, my regression models control explicitly for the automotive sector. Dr Talley's testimony that my paper "has a big problem in it as well as it's related to automotive – automotive industry dynamics"⁶⁵ is incorrect.

37. Fourth, the interview data from my 2011 paper⁶⁶ which Talley also cites was collected in 2009 and included interviews located in many states including several in California (in fact, none of the interviews took place in Michigan). The accompanying survey of the Institute of Electronics and Electrical Engineers drew on a random sample of their U.S. members nationwide in a variety of industries, the largest of which was software. Again, automotive is but a small portion of this dataset (15.4%).

38. Thus my research focuses on patenting inventors from 1975 through 2009, by definition in fast-paced, high-tech industries, only a small percentage of which are automotive, and with broad geographic coverage including California's Silicon Valley.

39. Dr. Talley is wrong in concluding that there is a "logical flaw[]"⁶⁷ between employees knowing what they have agreed to when they sign a non-compete agreement and being surprised that they are being asked to sign one. There is no contradiction. Even if employees are not given prior notice that they will be asked to sign a non-compete agreement, upon signing it they are aware (or at the very least have the opportunity to become aware, by reading the agreement) what they are agreeing to. My point was that the same was not the case with the secretive Anti-Solicitation Agreements among Defendants.

40. Both Dr. Talley and Dr. Snyder mischaracterize my report by asserting that I "fail[ed] to consider that there are fundamental differences between DNCCs and non-competes".⁶⁸ In fact, my report details differences between the two types of agreements,

⁶⁵ Deposition of Eric Talley. 258:13-15.

⁶⁶ M. Marx, "The Firm Strikes Back: Non-Compete Agreements and the Mobility of Technical Professionals." *American Sociological Review* 76(5):695-712. (2011).

⁶⁷ Expert report of Eric Talley. ¶ 89.

⁶⁸ Talley report, ¶ 81.

including that a) the former are between workers and firms while the latter are between firms only, and b) non-compete agreements prevent ex-employees from working at rivals while Anti-Solicitation Agreements do not. My point, to reiterate, was that both types of agreements are used to discourage interorganizational mobility and can reduce the flow of information about external job opportunities to workers.

41. Regarding mobility, my findings are consistent with those of Professor Mark Garmaise of UCLA, Professor Jim Rebitzer of Boston University, Bruce Fallick and Charles Fleischman of the Federal Reserve Board⁶⁹, Professor Ronald Gilson of Stanford University⁷⁰, and Professor Alan Hyde of Rutgers University⁷¹. As stated in the Defendants' interrogatory responses and by Defendants' experts, a key purpose of the Anti-Solicitation Agreements was to reduce the loss of personnel, which is also an aim of employee non-compete agreements. Thus they are highly relevant to this matter.

42. Regarding information flow about job opportunities, Anti-Solicitation Agreements accomplish this by blocking certain other potential employers from providing unsolicited information about job opportunities. Non-compete agreements accomplish this in that workers may be less likely to explore potential opportunities at firms they would be blocked from joining. Thus both types of agreements discourage the flow of information about external job opportunities.


43. Dr. Talley objects that Anti-Solicitation Agreements do not drive workers from their industry and thus reduce compensation as do non-compete agreements. But this is not the only way in which non-compete agreements lower compensation. The compensation-reducing

⁶⁹ Fallick, B., C. Fleischman, and J. Rebitzer. (2006). "Job-Hopping in Silicon Valley: Some Evidence Concerning the Micro-Foundations of a High Technology Cluster." *Review of Economics and Statistics* 88(3), 472-481.

⁷⁰ Gilson, R. J. (1999). "The legal infrastructure of high technology industrial districts: Silicon Valley, Route 128, and covenants not to compete." *New York University Law Review* 74: 575-629.

⁷¹ Orly Lobel, 2013. *Talent Wants to Be Free: Why We Should Learn to Love Leaks, Raids, and Free Riding*. Yale University Press.

effects of non-competes documented by Professor Garmaise do not depend on employees taking lower-paying jobs outside their industry; rather, “enforceable covenants not to compete discourage managers from investing in their own human capital” in that a non-compete “limits his future ability to negotiate a favorable compensation scheme.”⁷²



Matthew Marx
December 11, 2013

⁷² Garmaise, p.8

Exhibit 1: CV**Matt Marx**Office Address

Massachusetts Institute of Technology
 Sloan School of Management
 100 Main Street, E62-478
 Cambridge, MA 02142
 (617) 253-5539
 mmarx@mit.edu, <http://mmarx.scripts.mit.edu>

Home Address

158 Phillips Brooks Road
 Westwood, MA 02090
 (781) 686-9055

EMPLOYMENT

MIT Sloan School of Management	Cambridge, MA
Mitsui Career Development Professor of Entrepreneurship	2013-present
Alvin J. Siteman (1948) Career Development Professor of Entrepreneurship	2010-2013
Assistant Professor of Technological Innovation, Entrepreneurship, and Strategic Management	2009-present

Tellme Networks (acquired by Microsoft)	Mountain View, CA
Vice President, Solutions Delivery	1999-2004
<ul style="list-style-type: none"> Hired and led 75-person team that launched speech recognition services handling 1 billion calls per year. Grew annualized revenue from \$5M to \$100M. Reported to CEO and presented regularly to board. 	

SpeechWorks International (completed IPO)	Boston, MA
User Interface Engineer	1994-1999
<ul style="list-style-type: none"> Designed and implemented applications for Fortune 500 clients. Catalyzed decision to switch company's commercialization strategy from technology licensing to services. 	

EDUCATION

Harvard University	Boston, MA
Doctor of Business Administration	June 2009
Dissertation Title: Essays on Employee Non-compete Agreements.	
Committee: Lee Fleming (chair), Rakesh Khurana, Josh Lerner	

Harvard University	Boston, MA
Master of Business Administration (with Distinction)	2005

Massachusetts Institute of Technology	Cambridge, MA
S.M., Media Arts and Sciences (Motorola Fellow)	1995
Master's Thesis Title: Toward Effective Conversational Messaging	
Committee: Christopher Schmandt (chair), Pattie Maes, Nicole Yankelovich	

Stanford University	Stanford, CA
B.S., Symbolic Systems (with Distinction, Phi Beta Kappa, degree completed in three years)	1993

RESEARCH INTERESTS

My years as an engineer and an executive in startup companies yielded a deep interest in the emergence and evolution of new organizations. I employ both econometric methods and fieldwork to analyze how ventures assemble and deploy resources. My dissertation research explores the role of employee non-compete agreements in the ability of organizations to acquire talent and has been cited by the Massachusetts Governor's office as influencing their decision to support non-compete reform. More recently, I have constructed a dataset covering the

speech recognition industry since its inception in 1952 in order to explore how entrants formulate technical commercialization strategies and how these choices impact performance. My work has been recognized with several awards including a Kauffman Junior Faculty Fellowship in Entrepreneurship.

PUBLICATIONS

J. Singh and M. Marx. "Geographic Constraints on Knowledge Diffusion: Political Borders vs. Spatial Proximity." *Management Science* 59(9):2056-2078 (2013).

M. Marx and L. Fleming. "Non-compete Agreements: Barriers to Entry...and Exit?" in J. Lerner and S. Stern, eds., *Innovation Policy and the Economy* 12. (2012)

M. Marx, "The Firm Strikes Back: Non-Compete Agreements and the Mobility of Technical Professionals." *American Sociological Review* 76(5):695-712. (2011)

M. Marx, D. Strumsky, and L. Fleming, "Mobility, Skills, and the Michigan Non-compete Experiment." *Management Science* 55(6):875-889 (lead article). (2009)

L. Fleming and M. Marx, "Managing Inventive Creativity in Small Worlds." *California Management Review* 48(4):6-27. Winner of the Accenture Award for Contribution to Management Practice. (2007)

C. Christensen, M. Marx, and H. Stevenson. "The Tools of Cooperation and Change." *Harvard Business Review* 84(10). (2006)

WORKING PAPERS

M. Marx and D. Hsu. "Dynamic Commercialization Strategies for Disruptive Technologies: Evidence from the Speech Recognition Industry." (Under review at *Management Science*)

K. Younge and M. Marx, "The Value of Employee Retention: Evidence from a Natural Experiment." (under review at *Journal of Economics and Management Strategy*)

M. Marx and D. Hsu, 2013. "Strategic "switchbacks": dynamic commercialization strategies for technology entrepreneurs."

M. Marx, J. Singh, and L. Fleming, "Regional Disadvantage? Employee Non-compete Agreements and Brain Drain."

M. Marx, 2013. "Good work if you can get it...again: Non-compete agreements, technical expertise, and staffing small firms."

M. Marx and A. Kacperczyk, 2013. "Revisiting the Small-Firm Effect on Entrepreneurship: Evidence from Firm Dissolutions."

M. Marx, 2013. "On a Tight Leash? Venture Capital Staging and Strategic Flexibility."

M. Marx, 2013. "Co-mobility."

M. Ewens and M. Marx, 2013. "After the Thrill Is Gone: Investor Replacement of Executives in Imperiled Portfolio Companies."

A. Kacperczyk and M. Marx, 2013. "Transition to Entrepreneurship and Labor Market Discrimination."

FELLOWSHIPS AND AWARDS

2013 Ewing Marion Kauffman Foundation Junior Faculty Fellowship in Entrepreneurship (\$40,000)
2011 MIT Sloan Junior Faculty Research Assistance Program Grant (\$33,000)
2011 Edward B. Roberts (1957) Fund, MIT Entrepreneurship Center Fund Grant (\$16,500)
2010-2012 Alvin J. Siteman (1948) Career Development Chair
2010 DRUID Best Dissertation Award
2010 Academy of Management Technology Innovation Management Division Best Dissertation Finalist
2009 Academy of Management Technology Innovation Management Division Best Student Paper Award
2009 Wyss Award from Harvard Business School for Excellence in Doctoral Research
2008 Academy of Management Business Policy and Strategy Division Distinguished Student Paper Award
2007 California Management Review Accenture Award for Contribution to Management Practice
2007-2008 Ewing Marion Kauffman Dissertation Fellowship

TECHNICAL PUBLICATIONS AND PATENTS

U.S. Patent #7,321,856 "Handling of speech recognition in a declarative markup language." (2008)

U.S. Patent #7,143,039 "Providing menu and other services for an information processing system using a telephone or other audio interface." (2006)

U.S. Patent #7,140,004 "Method and apparatus for zero-footprint phone application development." (2006)

U.S. Patent #6,107,696 "System and method for handling a voice prompted conversation." (2005)

U.S. Patent #6,606,598 "Statistical computing and reporting for interactive speech applications." (2003)

U.S. Patent #6,173,266 "System and method for developing interactive speech applications." (2001)

U.S. Patent #6,747,026 "Transcription and reporting system." (2000)

U.S. Patent #5,995,928 "Method and apparatus for continuous spelling speech recognition with early identification." (1999)

M. Marx and C. Schmandt. "CLUES: Dynamic Personalized Message Filtering." *Proceedings of the ACM Conference on Computer Supported Cooperative Work* (1996)

M. Marx and C. Schmandt. "MailCall: Message presentation and navigation in a non-visual environment." *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (1996)

N. Yankelovich, G.A. Levow, and M. Marx. "Designing SpeechActs: Issues in Speech User Interfaces." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (1995)

M. Marx and C. Schmandt. "Putting People First: Specifying Proper Names in Speech Interfaces." *Proceedings of the 7th annual ACM symposium of User Interface Software and Technology* (1994)

M. Marx and C. Schmandt. "Reliable Spelling Despite Unreliable Letter Recognition." *Proceedings of the American Voice Input/Output Society* (1994)

GOVERNMENT TESTIMONY

M. Marx. "Testimony regarding MA house Bill H1794, An Act Regarding Noncompetition Agreements." Massachusetts Joint Committee on Labor and Workforce Development, Boston MA, 10 September 2013.

M. Marx. "Testimony regarding MA house Bill H1794, An Act Regarding Noncompetition Agreements." Massachusetts Joint Committee on Labor and Workforce Development, Boston MA, 15 September 2011.

M. Marx. "Testimony regarding MA House Bills H1794 and H1799, Acts Regarding Noncompetition Agreements." Massachusetts Joint Committee on Labor and Workforce Development, Boston MA, 7 October 2009.

TEACHING EXPERIENCE AND MATERIALS

15.394, Dilemmas in Founding New Ventures. Ratings were 4.8/5.0 for Spring 2011 and 6.6/7.0 for Spring 2013. Grew enrollment from 73 to 108. Overhauled prior syllabus and introduced simulation on firing employees, since adopted at Wharton and Harvard. Nominated for Sloan Excellence in Teaching Award each semester.

Frequent lecturer in executive education and the Trust Center for MIT Entrepreneurship.

Lee Fleming and Matt Marx. "Barry Riceman at NetD (A), (B), and (TN)." Harvard Business School Case 606-090.

OTHER ACADEMIC EXPERIENCE AND SERVICE

Guest Associate Editor for Management Science, November 2012. Ad-hoc reviewer for Management Science, American Sociological Review, Review of Economics and Statistics, Journal of Law and Economics, Organization Science, Review of Industrial Organization, Research Policy, California Management Review, Journal of Business Venturing.

Organizing Committee, 2011 Harvard/MIT Strategy Research Conference.

MIT Sloan Undergraduate Program Committee, 2010-2013.

Led 2013 Ph.D admissions and recruiting for the TIES group.

Organized MIT Sloan Behavioral and Policy Sciences Junior Faculty Retreat, 2010 and 2011.

PRESENTATIONS

Discussant/panelist

- OECD Symposium on "A Policy Framework for Knowledge-Based Capital." December 2012.
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, November 2012.
- NBER Summer Institute Intellectual Property Policy and Innovation Workshop, July 2012
- Boston Bar Association Symposium on Employee Non-Compete Agreements, July 2012
- CCC Doctoral Student Conference, April 2012
- NBER Productivity, Innovation, and Entrepreneurship Working Group, March 2012
- Labor and Employment Relations Association Annual Meeting, January 2012
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, September 2011
- Boston Bar Association Symposium on Employee Non-compete Agreements, July 2011
- NBER conference on Innovation Policy and the Economy. National Press Club, April 2011.
- Boston University Law School, March 2011
- Boston Bar Association Symposium on Employee Non-compete Agreements, July 2010

"Patent Citations and the Geography of Knowledge Spillovers: Disentangling the Role of State Borders, Metropolitan Boundaries and Distance."

- London Business School, Strategy & Entrepreneurship Department, November 2012
- Georgia Tech Roundtable on Engineering Entrepreneurship Research (REER) conference, November 2012.

- Boston University Strategy & Innovation Department, August 2012
- Academy of Management Annual Meeting, August 2012
- Sloan Economic Sociology Working Group, July 2011

“Technology Commercialization Strategy Dynamics and Entrepreneurial Performance: Evidence from the Speech Recognition Industry”

- Harvard Business School Strategy Unit Seminar, November 2013.
- University of Toronto Rotman School of Business Strategy Unit Seminar, October 2013.
- Industry Studies Association Annual Meeting, May 2013.
- Darden/Cambridge Entrepreneurship Conference, May 2013
- Duke Fuqua School of Business Strategy Conference, October 2012
- Carnegie Mellon University, SETChange department seminar series, October 2012
- West Coast Research Symposium, September 2012
- Academy of Management Annual Meeting, August 2012
- Queen’s University Conference on the Economics of Innovation and Entrepreneurship, June 2012
- Atlanta Competitive Advantage Conference, May 2012
- London Business School Sumantra Ghoshal Conference, May 2012
- University of Chicago Organizations and Markets Department Seminar, April 2012
- The Wharton School Management Department Seminar, University of Pennsylvania, March 2012
- BYU-University of Utah Winter Strategy Conference, March 2012
- INFORMS annual meeting, November 2011
- Harvard Business School Strategy Conference, November 2011

“The market valuation of strategic human capital: evidence from a natural experiment.”

- Stanford Organizational Behavior Department Seminar, October 2012
- Berkeley Innovation Seminar, April 2012

“Regional Disadvantage? Non-compete Enforcement and Brain Drain”

- UCLA Anderson Policy Group seminar, October 2011.
- Stanford Institute for Economic Policy Research seminar, October 2011
- The Wharton School, University of Pennsylvania Management Department seminar, October 2011
- Olin School, Washington University in St. Louis, Organizations Department seminar, October 2011
- Harvard Business School, Entrepreneurial Management Department seminar, September 2011
- European School of Management & Technology Department seminar, September 2011
- Mobility and Competition Clause Workshop, Ludwigs-Maximilian-Universitaet, August 2011
- Academy of Management Annual Meeting, August 2011
- University of Virginia Darden Entrepreneurship Conference, May 2011
- NBER Summer Institute, Technology Policy and the Economy, July 2010.
- University of Maryland Entrepreneurship Conference, April 2010
- Georgia Tech Roundtable for Engineering Entrepreneurship Research Conference, November 2009
- Technology Transfer Society Annual Meeting, October 2009
- HEC Workshop on Entrepreneurial Entry, September 2009
- Wharton Operations and Information Management Department seminar, September 2009
- Association of American Geographers Annual Meeting, April 2008
- NBER Productivity Lunch, September 2009.

“The Firm Strikes Back: Non-compete Agreements and the Mobility of Technical Professionals”

- American Sociological Association Annual Meeting, August 2010
- University of Oregon West Coast Research Symposium, August 2010
- Eastern Sociological Society annual meeting, March 2010
- NBER Entrepreneurship Working Group Summer Institute, July 2009
- Wharton People & Organizations Conference, June 2009
- Carnegie Mellon / Catholic University of Portugal Entrepreneurship Research conference, January 2009

“On a Short Leash: New Organizations, New Strategies, and Venture Capital”

- Academy of Management Meeting, August 2008

“Good Work If You Can Get It: Non-competes and Ex-employees.

- NBER Summer Institute Entrepreneurship working group, July 2009

“Mobility, Skills, and the Michigan Non-compete Experiment”

- CCC Doctoral Student Consortium, April 2008
- George Washington University Law School Department seminar, September 2007
- Academy of Management Annual Meeting, August 2007
- Wharton Technology Mini-Conference, April 2007
- NBER Productivity Lunch, November 2006

MEDIA COVERAGE

“State judges take increasingly dim view of non-compete agreements.” *Boston Business Journal*, August 2013.

“Non-compete agreements getting harder to enforce.” *Mass High Tech: The Journal of New England Technology*, August 2013

“Set the Creators Free.” *Wired Magazine*, December 2012.

“Marblehead state rep eyes non-compete agreements.” *Marblehead Reporter*, 14 December 2011.

“Non-compete Laws Stifling Mass. High Tech Industry.” *RadioBoston, WBUR*, 29 November 2011.

“[Governor] Patrick Threatens Enforcement Ban on Non-competes.” *Boston Business Journal*, 16 September 2011.

“Non-compete agreements carry high costs for engineers.” *IEEE Spectrum*, 18 October 2011.

“Non-compete agreements create 'career detours'” *MIT News*, 5 October 2011.

“Want Your Innovators to Leave? Make Them Sign a Non-compete” *CBS Bnet*, 21 July 2011.

“Non-compete Clauses Stifling to Innovation in Mass.” *Boston Globe*, 3 July 2011.

“Stop Enforcing Non-Competes.” *Inc. Magazine*, 1 July 2010.

“Industry veterans share their dealings with non-compete agreements.” *Mass High Tech: The Journal of New England Technology*, 7 October 2009.

“Non-compete agreements hinder job switchers.” *Wall Street Journal / FINS*, 10 August 2009.

“Non-compete clause changes are in the air again.” *Mass High Tech: The Journal of New England Technology*, 31 July 2009.

“Clause for Concern.” *Boston Globe*, 10 July 2009.

“Start-ups stifled by non-competes.” *Boston Globe*, 21 June 2009.

“I signed a non-compete, but now I want a new job.” *CNNMoney*, 8 April 2009.

“Til lawsuits do us part.” *IEEE Spectrum*, April 2009.

“Non-compete pact called bad for innovation.” *PC World*, 20 June 2008.

“The noncompete conundrum: Holding back Bay State tech, or preserving IP?” *Mass High Tech: The Journal of New England Technology*, 11 February 2008.

“Why non-compete means don't-thrive.” *Boston Globe*, 30 December 2007.

Exhibit 2: List of exhibits and materials considered.

Academic Articles

Lester, G. and E. Ryan, 2010. "Choice of Law and Employee Restrictive Covenants: an American Perspective." *Comparative Labor Law & Policy Journal* 31(2):392.

Garmaise, Mark. "The Ties that Truly Bind: Noncompetition Agreements, Executive Compensation, and Firm Investment." *The Journal of Law, Economics, and Organization*. 27(2):376-425.

Hyde, 2003. *Working in Silicon Valley: Economic and Legal Analysis of a High-Velocity Labor Market*. M.E. Sharpe.

Saxenian, A. 1996 *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press.

Almeida, P., and B. Kogut, 1999. "Localization of Knowledge and the Mobility of Engineers in Regional Networks." *Management Science* 45(7):905.

Breschi, Stefano and Francesco Lissoni, "Mobility of skilled workers and co-invention networks: an anatomy of localized knowledge flows." *Journal of Economic Geography* 9(4):439-468.

Fallick, B., C. Fleischman, and J. Rebitzer. (2006). "Job-Hopping in Silicon Valley: Some Evidence Concerning the Micro-Foundations of a High Technology Cluster." *Review of Economics and Statistics* 88(3), 472-481

Gilson, R. J. (1999). "The legal infrastructure of high technology industrial districts: Silicon Valley, Route 128, and covenants not to compete." *New York University Law Review* 74: 575-629.

Orly Lobel, 2013. *Talent Wants to Be Free: Why We Should Learn to Love Leaks, Raids, and Free Riding*. Yale University Press.

M. Marx, "The Firm Strikes Back: Non-Compete Agreements and the Mobility of Technical Professionals." *American Sociological Review* 76(5):695-712. (2011)

M. Marx, D. Strumsky, and L. Fleming, "Mobility, Skills, and the Michigan Non-compete Experiment." *Management Science* 55(6):875-889 (lead article). (2009)

Declarations

Declaration of Sheryl Sandberg

Declaration of Ed Colligan

Depositions

Deposition of Ed Catmull

Deposition of Eric Talley (rough)

Deposition of Eric Snyder (rough)

Deposition of Danielle Lambert

Deposition of Paul Otellini

Deposition of Arnnon Geshuri

Deposition of Matthew Marx

Deposition of Shona Brown

Deposition of Sergey Brin

Deposition of Bruce Chizen

Deposition of Eric Schmidt

Deposition Exhibits

Exhibit 265 (231APPLE085774)

Exhibit 184 (GOOG-HIGH-TECH-00009270)

Exhibit 614 (GOOG-HIGH-TECH-00379327)

Exhibit 1741 (GOOG-HIGH-TECH-00194866)

Expert Reports

Expert Report of Edward Snyder

Expert Report of Eric Talley

Expert Report of Kevin Murphy, 25 November 2013

Expert Report of Matthew Marx

Expert Report of Daniel Lewin

Responses to Interrogatories

Intel's Objections and Amended and Supplemented Responses to Plaintiffs' Second set of Interrogatories

Defendant Adobe Systems Incorporated's Amended Answer to Plaintiff's Consolidated Amended Complaint

Defendant Apple Inc.'s Amended Responses to Plaintiffs' Second Set of Interrogatories

Google Inc.'s Responses to Plaintiffs' Second Set of Interrogatories

Defendant Intuit Inc.'s Amended Answer to Plaintiffs' Consolidated Amended Complaint

Other Documents

GOOG-HIGH-TECH-00008283

GOOG-HIGH-TECH-00625496

231APPLE123280

231APPLE124988

GOOG-HIGH-TECH-00024150

"Model Confidentiality Agreement," in Model Merger Agreement for the Acquisition of a Public Company, ABA Publishing, 2011, pp. 341-71

Stipulation to Enter Final Judgment, *United States v. Adobe, et al.*, Case No. 10-cv-01629 (D.C. Dist. September 24, 2010), Docket No.3

Hodgin, Rick, "Intel seeking Google's Android OS for future MIDs," Geek, July 10, 2009, <http://www.geek.com/mobile/intel-seeking-googles-android-os-for-future-mids-834691/>

<http://www.forbes.com/sites/briancaulfield/2012/05/09/intel-is-the-biggest-software-company-youve-never-heard-of/>

<http://blogs.intel.com/application-security/2012/06/19/the-%e2%80%9cintel%e2%80%9d-on-intel-is-we-do-software/>

Exhibit 3: Software Employees at Defendants

Summary of Software Engineers By Defendant

Defendant	Class Period	Number of Software Engineers
(1)	(2)	(3)
ADOBE	05/05-12/09	2,491
APPLE	03/05-12/09	3,319
GOOGLE	03/05-12/09	5,399
INTEL	03/05-12/09	6,848
INTUIT	06/07-12/09	1,802
LUCASFILM ¹	01/05-12/09	124
PIXAR	01/05-12/09	128
TOTAL		20,111

¹Missing job title information prior to 2005.

Source: Defendants' employee compensation data.

Note: Software engineers were identified as having one or more of the following strings in their job title: SOFTWARE, SW-DEV, COMPUTER-SCIENTIST, SW_PROD_QUALITY_SPEC, SW_QUALITY_ANALYST, SWEZ_SRE, SWE_IN_QUALITY, SW_ENG, SW_QA_ENG, WEB_APPLICATIONS_ENGINEER, APPLICATION_DEVELOPER, APPS_DEVELOPER, APPLICATIONS_DEVELOPER, SW_QA_ENG, SW_INFRASTRUCTURE. Similar results are found when also matching on PROGRAMMER.